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ABSTRACT

A study examined the objectives of supported employment programs for individuals with severe disabilities and identified performance measures to document the practices and achievements of such programs at the federal, state, and local levels. A set of proposed data items and potential performance measures was developed on the basis of programs objectives, performance questions, and feasibility issues that were identified from a literature review, telephone discussions with a broad range of policymakers and practitioners, consultation with an advisory committee, and meetings of the 10 first-round demonstration states. A national seminar and a California state forum were convened to address the desirability and feasibility of attempting to implement consistent data collection across projects and states, share ideas for dissemination of project findings, and prioritize research questions and areas of future study. Performance measures were developed to assess employment outcomes, quality of employment, opportunities for worksite integration, ongoing support, quality of life, participant characteristics, systems change, and supported employment costs. (Appendices to this report include lists of study respondents and seminar participants, a 21-page bibliography, and the current Office of Special Education and Rehabilitation Services definition of supported employment.) (MN)

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DEVELOPMENT OF PERFORMANCE MEASURES FOR SUPPORTED EMPLOYMENT PROGRAMS

FINAL REPORT

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INTRODUCTION

OVERVIEW

This report is the final report of a twelve-month study performed by Berkeley Planning Associates (BPA) for the U.S. Department of Education/Office of Special Education and Rehabilitation Services (OSERS) to develop performance measures for supported employment programs. The term "supported employment" refers to a broad family of local programs and state-level projects designed to establish or expand supported employment opportunities for individuals with severe disabilities. The supported employment concept includes the provision of ongoing publicly-funded support services that participants need in order to sustain employment (hence the name "supported employment").

As defined by the five-year National Supported Employment Demonstration program implemented by OSERS in September 1985, "supported employment" consists of the creation or expansion of compensated, meaningful work opportunities for individuals with severe disabilities.[1] These work opportunities are to be created in job settings where disabled workers have opportunities for social interaction with nondisabled coworkers or the general public, and are intended to offer a significant number of hours of compensated work each week. The National Supported Employment Demonstration provides states with additional financial resources to be used for "system transformation" -- i.e. to transform existing day activity and work activity programs into systems that create opportunities for individuals to realize their potential for productive work in an integrated setting. In many states, supported employment activities are also increasing in response to local initiative. Projects are expanding options within local service systems with or without formal state plans for system transformation, and with or without federal incentive funding.

It has been the intent of this BPA study to help clarify supported employment program objectives and identify performance measures that can be used at a variety of different levels -- federal, state, and local -- to document the practices and achievements of supported employment programs as they continue to receive greater attention and are provided with a greater share of the program resources throughout the nation.

The activities carried out under the BPA study were framed as activities to "seek consensus" across a large number of actors involved in a broad range of supported employment activities around the country. One of the reasons for the emphasis on seeking consensus is that supported employment represents a loose envelope of closely-related and like-minded program efforts, rather than a single program with a clearly defined identity supported by a single legislative mandate, funding source, or organizational setting. In such an environment, it is likely that any state efforts to generate summary data on program accomplishments will be the result of voluntary cooperation rather than hierarchically imposed data collection or reporting requirements.

The second reason for emphasizing consensus is the need to arrive at a core group of objectives and performance measures that adequately describe the common elements and intentions of supported employment programs that vary widely in their details of operation. At the heart of this study has been a recognition of, and a respect for, the diversity of supported employment approaches--ranging from individual placement models to mobile crews to group work stations (enclaves) within industry--as well as the diversity of program participants, funding sources, and agency roles. Thus, rather than being viewed as a way to increase program uniformity, the performance measures discussed in this report are attempts to identify and reflect movement toward common goals, objectives and desired outcomes by a very diverse universe of supported employment projects.

SUMMARY OF STUDY METHODOLOGY

The study methodology used was primarily the gathering and synthesis of a large body of existing information and expert opinion about the goals of supported employment and ways of measuring their achievement. In conducting the technical work on this study, the BPA study team:

- reviewed the growing body of literature on supported employment and related program models and topics;
- conducted telephone discussions with a broad range of policy makers, program implementors, and researchers involved with supported employment and related efforts, including key individuals from the initial ten states participating in the National Supported Employment Demonstration;
- formed an Advisory Panel of individuals representing various projects, universities, states, and organizations involved with supported employment, which provided information, expertise and feedback throughout the study, on both an individual and a group basis (with a small group of consultants also participating as particular sources of guidance and input);
- participated in meetings of the ten first-round demonstration states to discuss performance measurement, data collection, and definitional issues of particular concern to the National Supported Employment Demonstration;
- gathered examples of data collection instruments, evaluation systems and statistical reports currently being used in supported employment programs and related fields and assessed the current availability of existing measures to address key aspects of program performance;
- developed a set of proposed data items and potential performance measures based on the identified program objectives, performance questions to be addressed, and feasibility issues; and
- convened both a California State Forum on Supported Employment Goals and Performance Measures (with local matching funds from the San Francisco Foundation) and a National Supported Employment Consensus Seminar of those involved in the emerging supported employment to react to the proposed performance measures. In addition, on

local, state and national levels the groups discussed (1) the desirability and feasibility of attempting to implement consistent data collection across projects and states; (2) ideas for dissemination of project findings; and (3) prioritizing research questions and areas of future study in measurement development and evaluating aspects of performance not included in the projects' ongoing monitoring eforts.

Four prior reports were prepared at various stages of the study which reflected these research and analysis activities, including:

- Task 2 Report: Documentation of Program Objectives, Berkeley Planning Associates, October 1985. This first report documented supported employment program objectives from the client, project, and system level perspectives;
- Task 3 Report: Supported Employment Logic Model, Berkeley Planning Associates, December 1985. The second report described the supported employment program logic model by linking program objectives to the program designs, implementation strategies, and intended outcomes associated with their achievement. This report also began to identify data items associated with federal, state, and local perspectives of the logic model;
- Tasks 4 and 5: Availability of Existing Measures and Need for Additional Measures to Address Program Objectives, Berkeley Planning Associates, April 1986. The third report summarized the current availability of measures useful for documenting the achievements of supported employment projects and began to assess the feasibility of expanding data collection practices to include additional relevant measures; and
- Task 6: Recommended Measures and Implementation Plan, Berkeley Planning Associates, May 1986. The purpose of this report was to identify from within the wide range of possible measures, those data items and performance

measures that address the key questions of case managers, project administrators, consumers, parents, caregivers, and state and federal observers. These recommended measures formed the basis for further discussion and for the consensus building activities. Implementation issues were also addressed.

CONTENTS OF THIS REPORT

This report traces BPA's exploration of the extent of consensus about the essential performance questions to be addressed in assessing supported employment efforts. In Part I of this report, we review the extent of consensus about the conceptual framework on which performance measurement for supported employment must be based, including (1) consensus about program objectives, (2) the identification of the intended program strategies to bring about the desired outcomes; (3) consensus about what performance questions should be asked (and answered), and (4) consensus about how to identify the areas of program management, operation, and outcomes for which performance measures need to be developed.

Part II of this report addresses the development of consensus on a more practical level -- the development of consensus about what specific data items might be collected and reported on a day-to-day basis by local programs and/or state transformation projects in order to address the common concerns identified in Part I. This second part of the report describes how implementation of a core set of consensus measures might proceed at the project and state levels.

Part III of the Final Report addresses the identification of future research priorities to address important performance questions for which ongoing day-to-day data collection and analysis at the project or state level is either insufficient or unnecessary. It also discusses the need for further refinement of potential measures in some areas where there is already consensus at the conceptual level about the importance of an outcome domain (e.g. social integration, quality of life), but for which concrete data items have not yet been developed.

NOTES

[1] For the more detailed current federal definition of supported employment, developed by OSERS for designing the National Demonstration projects, see Appendix D of this report.

PART I:

ESTABLISHING CONSENSUS ABOUT PROGRAM OBJECTIVES AND THE ROLE OF PERFORMANCE MEASUREMENT

I. ESTABLISHING CONSENSUS ABOUT SUPPORTED EMPLOYMENT PROGRAM OBJECTIVES

OVERVIEW

After exploring the degree of agreement about supported employment objectives with representatives of a variety of program models and system level perspectives (e.g., individual project, local system, state system, and federal perspectives) as well as researchers on and proponents of the supported employment concept, we were able to identify a remarkable degree of consensus regarding six broad areas of desired program performance:

- Meaningful Work;
- Compensation;
- Ongoing Support;
- Worksite Integration and Community Participation;
- Quality of Life; and
- Community Change.[1]

(There were two other potential performance domains where less consensus was apparent. These include system transformation objectives and target population objectives and are discussed further at the end of this chapter.)

Each of these goal areas, or domains, represents a common goal or set of program objectives of supported employment. However, not surprisingly, the degree of consensus is not absolute. Within each goal area, there are competing perspectives about what priority an objective should be assigned relative to other program objectives, and exactly how to approach measurement of the domain. Furthermore, each desired performance domain can be expressed: (1) from the perspective of an individual supported employment participant (as a client objective); (2) from the perspective of a local supported employment program (as a project objective); and (3) from the perspective of a local, state, or federal service system (as a system objective).

Table I summarizes the objectives for which there appears to be consensus in each of the six performance domains, expressed first as a

Table 1

Examples of Common Supported Employment Objectives

	Individual Level	Project Level	System Level
Employment			
Meaningful Work	To maximize the opportunity to do real productive work To increase job satisfaction by achieving the following: -- interesting work -- appropriate level of skills -- upward mobility potential -- pleasant work environment - lighting - accessibility - space -- job security To maximize productivity	To provide a variety of opportunities for real work To maximize hours of available work To match clients' skills and interests with type of work To provide work opportunities that have job security To maximize range of job opportunities To maximize productivity	To maximize number of individuals entering supported employment as opposed to day activity centers To maximize hours that participants do real work To maximize productivity and net contribution to the "social product" or total value produced by the society To maximize range of job opportunities
Compensation	To increase income over time To obtain medical and fringe benefits from employer To earn wages comparable to productivity	To maximize opportunities to earn commensurate wages To maximize opportunities for jobs with comprehensive benefit packages To provide potential for increased earnings	To increase the number of disabled individuals employed at commensurate wages To reduce dependence on transfer payments and maximize tax contributions
Ongoing Support	To receive appropriate support from supported employment personnel to facilitate the learning of job and general employment skills To receive appropriate follow-up services from supported employment programs To receive funds or program services from one or multiple agencies that will facilitate continuity of employment To receive appropriate assistance from nondisabled coworkers and/or supervisors as needed in assigned work activities	To provide training in specific work skills related to job placement as well as training in general employment skills To provide follow-up services as needed over an unspecified time period To provide or arrange for the provision of ongoing training or support services to the disabled client, thus assuring continuity of employment over time To provide in-service training to coworkers and supervisors, sensitizing them to specific (client-related) learning and social needs	To coordinate the employment activities or multiple agencies providing services to severely disabled individuals in order to maximize system-wide effectiveness To coordinate the fiscal activities of multiple agencies that typically fund employment training and support to severly disabled individuals in order to maximize system-wide efficiency To develop coordinated mechanisms for ensuring the long-term provision of employment training and support (either through program funding or individual funding schemes) To increase the supply of trained supported employment service providers

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Table 1 (continued)

	Individual Level	Project Level	System Level
Ongoing Support (continued)	To receive appropriate support from nondisabled coworkers when functioning in the workplace social environment	To provide support to coworkers and supervisors in dealing with disabled clients' needs	To maximize the participation (fiscal incentives and/or public recognition) of the business community in providing support to severely disabled workers
Integration At Work	To increase interaction with nondisabled workers To have skills necessary to make a variety of meaningful contacts with nondisabled and disabled coworkers	To provide opportunities for clients to socially integrate with disabled and nondisabled coworkers To provide skills necessary to make a variety of meaningful contacts with coworkers To provide employment opportunities	To create, support, and promote programs that fit into context of local business community To maximize the number of disabled individuals gaining access to integrated work environments
In the Community	To increase knowledge, participation and utilization of community environments where social interaction can occur To develop skills necessary to make a variety of contacts with nondisabled and disabled individuals	Same concepts as above (Integration - Work) but within the context of community	Same concepts as above (Integration - Work) but within the context of community
Quality of Life	To obtain access to and privileges from society which are most commonly associated with work (i.e., pleasure related to communicating with others about work) To obtain access to a greater repertoire of social skills -- thus allowing for greater participation in a wider array of social environments To increase self-concept To obtain greater participation in an array of activities (e.g., less sleep and TV watching) To obtain understanding of "choice" and to have the opportunity to choose in day-to-day-situations To obtain the opportunity to live more independently	To provide training and support in activities that improve quality of life; i.e., exposure to multiple environments, teaching to choose and providing day-to-day situations where the client has the opportunity to make choices	To develop a system of supported employment that will promote client options leading to improved quality of life

Table 1 (continued)

	Individual Level	Project Level	System Level
Quality of Life (continued)	To obtain increased access to community resources To increase family or caregiver satisfaction by relieving pressure of total care responsibility as self-care ability of client increases	See previous page	See previous page
Community Change	To change attitudes of nondisabled toward persons with disabilities due to exposure to severely disabled people in the workplace and in the community To demonstrate that participation of persons with severe disabilities in work, leisure/recreation, independent living arrangements, etc. is normative To demonstrate the need for environmental adaptations as a means to facilitate the work and social life of severely disabled people	To obtain access to an array of environments typically restricted to nondisabled participation; i.e., family night swim, "Y" fitness activities, public transportation To promote community awareness of skills and special needs of severely disabled people To promote the interaction of nondisabled people with severely disabled peers To promote community action that supports the work, personal and living needs of severely disabled people To promote the initiation and completion of environmental adaptations which will increase the level of participation of disabled people in an array of work and community environments and activities	Same as project-level, but from the standpoint of developing methods and procedures which promote these objectives on a systems level

client objective, then as a project objective, and finally as a system objective. The following discussion highlights areas of agreement, as well as ongoing debates about nuances of interpretation and relative emphasis.

In describing supported employment objectives within each area of project or client performance, one question that arises frequently is "how do you know when an individual has reached a supported employment outcome?" It is clear that working definitions of supported employment are essential, both in order to provide guidance to states and program operators about the outcomes to be sought with different program funds, and to clarify what universe of individuals should be described by supported employment performance measures. Throughout this study, however, we have attempted to encourage a conceptual framework that will track progress towards supported employment objectives, even for individuals who have not yet achieved the levels described in current federal administrative guidelines for supported employment demonstration projects (e.g., a minimum of 20 hours of paid employment per week with at most eight other workers with severe disabilities in the immediate setting). Thus, for most of the performance domains described below, the program objectives are framed in terms of maximizing the potential of each participant, rather than achieving a specific absolute level or standard. These performance questions describe dimensions along which performance might vary rather than specific expections about the degree of achievement.

MEANINGFUL WORK

There is consensus that the client-level objectives of supported employment include:

- maximizing the opportunity for individuals to do real productive work;
- increasing job satisfaction by assisting participants to achieve and maintain employment that:
  - -- is interesting,
  - -- is appropriate to their individual skills,

  - -- takes place in a pleasant work environment,
  - -- has potential for job mobility, as desired by participant, and
  - -- offers job security; and
- maximizing the productivity (and thereby increasing the compensation) of the individual.

Expressed at the project level, the objective of achieving meaningful work coalesces in the notion of achieving a good job-match for participants. This implies:

- providing a variety of work opportunities to match the varied interests and abilities of different participants;
- having procedures for matching job requirements and client skills and interests; and
- being able to respond to participants' needs for job security/work variety over time.

From the system perspective, the objective of meaningful work can be expressed as:

- maximizing the number of severely disabled individuals entering supported employment;
- maximizing the range of job opportunities in supported employment;
- maximizing the hours of meaningful work available to participants; and
- maximizing worker productivity.

There is little controversy over the supported employment goal of meaningful work. This does not mean, however, that it is easy to translate this goal into measurable indicators of client, project, or system performance. In fact, as discussed later, specific measures of job quality and "goodness-of-fit" have not yet emerged in the supported employment field. One minor source of tension in this area arises over how to maximize the diversity of work opportunities in the early stages of system transformation when program resources may permit implementation of only a limited number of supported employment models or job sites.

COMPENSATION

The program objective of compensation is critical to the supported employment concept as one of the primary means by which increased community integration, and improved life quality (two other program goals) are expected to occur. Expressed at the client level, there is consensus that the goals of supported employment include:

- increasing participant income over time;
- maximizing the receipt of medical coverage and other fringe benefits, as part of the total employment compensation package; and
- ensuring that compensation levels are commensurate with productivity.

As shown in Table 1, these objectives translate fairly directly into project and system-level goals oriented toward maximizing compensation and benefit packages. Table 1 notes that a related system-level goal (arising out of taxpayer interest in controlling the costs of income-support programs) is reducing the dependence of severely disabled individuals on income transfer payments (i.e. SSI).

There are several areas where the consensus on the supported employment goal of compensated employment is incomplete. One such area concerns the benefits to be gained from volunteer or uncompensated work. A dissenting view holds that meaningful work integrated in a nonsheltered worksite, even if unpaid, can offer persons with the most severe disabilities a significantly increased quality of life. However, strong counter arguments hold that it is not necessary to compromise on the issue of compensation, since both compensation and social integration can be achieved, even for individuals with the most severe disabilities.

A second tension associated with the goal of maximizing compensation recognizes the continuing financial and emotional disincentives faced by recipients of supplementary security income (SSI) benefits or other income support programs when they face terminating their eligibility for SSI and associated medical coverage by earning over a given earnings "cutoff" level. This is a special concern in cases of seasonal or unstable employment given the frequent difficulty and delays in reestablishing eligibility for income support. Rather than simply assuming that increased compensation necessarily results in improved financial status and security for supported employment participants, it will be necessary to carefully study this aspect of client impacts as a high priority program evaluation issue.

ONGOING SUPPORT

The provision of ongoing support represents a service goal for the entire community system of services available to supported employment participants, as well as a goal for supported employment projects themselves. Expressed at the client level, the goals of providing ongoing support include:

- providing each client with the appropriate support to facilitate the learning of general employment skills as well as specific job requirements;
- providing each client with the requisite follow-along support to maintain performance on the job over time (either from project staff or other community agencies);
- coordinating the delivery of an ongoing package of publicly-funded support services necessary to sustain employment, from one or more agencies; and
- encouraging the provision of ongoing support from informal or non-publicly funded sources, as feasible and appropriate (e.g., from nondisabled coworkers or employers).

Expressed at the project level, the goal of providing ongoing support includes:

- developing the program capacity to directly provide training and follow-up support with supported employment project staff; and
- arranging for and training other community agencies to take over the provision of ongoing support, as necessary to ensure continuity over time.

Project training of other individuals -- including parents, coworkers, and job supervisors -- to sensitize them to the learning and social support needs of specific participants can also be a project objective relevant to the delivery of ongoing support.

Expressed at the system level, the goal of providing ongoing support can be translated into an issue of interagency coordination and funding provisions. Specific system goals include:

- coordinating the activities of the multiple agencies providing services to individuals with severe disabilities to increase service availability and continuity;
- negotiating the funding support and clarifying the organizational responsibilities for delivery of ongoing support among the several agencies providing these services; and
- increasing the supply of individuals trained to provide supported employment services.

The provision of ongoing support is the key distinctive feature of supported employment programs that permits participants to obtain or retain jobs in integrated compensated employment settings. However, there are widespread variations in practice in the types of support provided, what funding source(s) pay for the ongoing support, and what agencies provide the ongoing support. Along with these variations come differences of opinion about the extent to which a supported employment project should itself be responsible for providing, monitoring, and/or reporting on the delivery of support over time. These differences of opinion become especially apparent when the range of ongoing supports is interpreted broadly to include not only support directly related to performance on the job, but also support such as assistance with transportation, personal care during the work day, or support in life activities outside of work.

WORKSITE INTEGRATION AND COMMUNITY PARTICIPATION

We found broad consensus on supported employment objectives in the areas of integration at work and integration in the community. Worksite integration is viewed as desirable for a number of reasons. First, it is viewed as a powerful agent for encouraging social interaction between disabled participants and nondisabled coworkers, which, it is hoped, will result in the dual benefits of improved attitudes towards persons with disabilities and increased normalization of the lifestyle of the participants themselves. Second, worksite integration is believed to have a positive effect on the skills levels and job performance achieved by disabled participants. Community integration is viewed as the extension of these integration goals to include interactions and activities that occur outside the work place, with an extension of the same benefits to include normalization, improved community attitudes, and improved life quality.

Expressed at the client and project levels, the supported employment goal of integration can be summarized as the intent to increase the opportunities for and the frequency of meaningful social integration between disabled and nondisabled coworkers as a result of supported employment. A related objective designed to increase the level of community integration experienced by supported employment participants is the intent to increase participant utilization of community environments where social integration can occur.

From the system perspective, the related goals of worksite and community integration include:

- promoting job sites that are integrated into the fabric of the local business community;
- maximizing the number of disabled individuals with jobs in socially integrated work environments; and
- maximizing the number of disabled individuals who can and do access the broader local community environment.

Conceptually, there is substantial consensus about the program's integration goals. However, as we shall see in subsequent chapters, there are a variety of different perspectives about how to measure the extent of integration that is occurring. These range from computing the ratio of disabled to nondisabled workers, to analyzing the job requirements for social interaction in completing job tasks, to recording (on a sample basis) the actual frequency and content of interactions between disabled and nondisabled workers.

QUALITY OF LIFE

"Quality of Life" is a residual category describing all the reasons (other than the work itself) why supported employment participants are expected to be "better off" after entering supported employment than before. These desired client outcomes are generally perceived as secondary outcomes resulting from the primary program goals of meaningful work, compensation, and increased worksite and community integration.

At the client level, they include, among other elements:

- an improved self-concept;
- a broader repertoire of social skills, allowing participation in a wider array of social environments;
- an increased choice of leisure time activities, resulting from the combination of increased spending money, greater social skills, and greater access to community environments; and
- an opportunity for greater independence in living situation, and other activities.

Expressed at the project and system levels, the goal of improved quality of life involves increased emphasis on the value of client self-direction or choice. Thus, as Table 1 indicates, the quality of life objective of supported employment projects can be summarized as the goal of exposing participants to different environments in which they have the opportunity to make choices, and assisting them in learning how to choose. At the system level, the goal of improving life quality can be summarized as the creation of a service system that will promote client options leading to client choice about an improved quality of life.

Although there was no disagreement about the goal of improving quality of life, there was some disagreement across respondents about whether quality of life is a discrete independent objective that needs to be examined separately from the goals of meaningful work, compensation, and social integration, or whether it is adequately represented by these more concrete domains.

COMMUNITY CHANGE

Another goal of supported employment is to promote changes in the community environment. From the client perspective, this objective includes:

- changing the attitudes of nondisabled persons towards persons with disabilities through increased exposure to severely disabled individuals in the workplace and community;
- demonstrating that persons with severe disabilities can live and work and play in socially integrated settings;
- demonstrating that environment adaptations and supports can facilitate the work and social life of severely disabled people.

From the project and system perspectives, these goals can be translated into community education and community change agenda items:

- promoting community awareness of the skills and special needs of severely disabled people;
- promoting the development of community resources to support the work, personal, and living needs of severely disabled people;

- promoting access by disabled individuals to environments typically restricted to nondisabled people; and
- promoting the initiation of environmental adaptations to increase the level of participation of disabled people in community work and living environments.

SETTING PRIORITIES FOR CLIENT SELECTION

Two additional performance domains were explored as part of the activity of identifying consensus about supported employment program objectives: *setting priorities for client selection* and *system transformation*. While the six performance domains previously discussed are closely related to the establishment of performance goals for individual participants, client selection and system transformation more clearly reflect project-level or system-level goals.

Surprisingly, *client selection* has not received much public attention as a project or system-level goal. Although the philosophy of supported employment is clear about the goal of promoting access to meaningful work for individuals who were previously excluded from employment because they were labeled "infeasible for employment," there is no consensus that supported employment projects should necessarily be targeting services to a single group (e.g., the most severely disadvantaged). The absence of any consensus about establishing priority groups for client selection is probably due to a combination of the prevalent "zero-reject" philosophy and a fear of being forced to serve those clients who are the most diffcult to serve. There is an intent to use the supported employment approach to reach severely disabled individuals previously excluded from employment services, and many have no desire to accomplish this objective by excluding other disabled individuals from participation in supported employment.

In current debates on client targeting issues, one strongly held view states that supported employment should explicitly target participants currently in day activity or work activity programs, rather than letting the program gradually filter down to these groups by initially targeting sheltered workshop participants. Yet another perspective views the population "aging out" of special education programs as the highest priority population for recruitment into supported employment. In the short run, it appears that participant recruitment and selection patterns will be governed by funding source restrictions and individual agency preference, rather than national consensus.

SYSTEM TRANSFORMATION

The final program objective -- systems change -- is closely related to the particular goals of the OSER's National Supported Employment Demonstration project grants, awarded to ten states in the fall of 1985. The establishment of systems change goals for this federal demonstration project is based on a recognition that, in order to be implemented on a broad scale, supported employment requires the ability to confront and redefine existing state policies, procedures, funding streams, and program structures.[2] Ultimately, the systems change goal of supported employment is to significantly increase the absolute volume of severely disabled individuals in supported employment over time, and to increase the ratio of resources devoted to supported employment compared to other public expenditures on services for severely disabled individuals over time, without increasing the total federal expenditures on day programs for severely disabled individuals.

The more immediate system-level objectives include:

- Addressing and redefining current policies and procedures which serve as roadblocks to implementation of supported employment;
- Developing cooperation and coordination between key system-level agencies in the form of interagency agreements in order to utilize services and funding to the utmost;
- Providing adequate funding, technical assistance, and resource development in order to transform existing program structures and to assist in the development of new programming; and

- Providing avenues for communication between key actors involved with supported employment so that support for and concerns with these efforts can be addressed.

CHAPTER I NOTES

[1] For a more detailed discussion of these findings, see Berkeley Planning Associates, *Task 2 Report: Documentation of Program Objectives*, October 1985.

[2] Additionally, national systems change is required to overcome existing work disincentives created by SSI program regulations.

II. DESCRIBING THE PROGRAM LOGIC

Establishing an understanding of the policy objectives of a new program initiative like supported employment is a critical first step in developing a framework for performance monitoring and program evaluation. The performance measures will focus on measuring the extent to which these objectives are achieved. However, before specifying these measures, a necessary second step is describing the intended program **strategy** by which the desired outcomes are to be brought about. The specific implementation strategies selected and the relative priority given to different program goals will influence the selection of specific measures of program achievement. For example, measures of **maximizing the number of individuals entering supported employment** might include monitoring overtime indicators such as:

- the ratio of supported employment participants to participants in traditional day or work activity programs; or
- the proportion of individuals in day activity centers prior to the supported employment initiative who are currently in supported employment.

The choice between these measures might depend on a particular state's strategy of placing primary emphasize on targeting the "aging out" special education population for supported employment versus targeting primarily individuals currently in day activity programs.

An analytic tool developed identify and describe these strategies is called "a program logic model." A logic model simply describes the program inputs (which consist of policy objectives and resources), the program strategies and activities developed from the inputs, and the desired outcomes, as well as the intended causal relationships between inputs, activities, and desired outcomes. In describing the program logic model for supported employment, we discovered that the supported employment program logic varies somewhat at the federal, state, and local project levels in terms of the emphasis placed on different objectives. This chapter summarizes the logic models at each level.

THE FEDERAL LOGIC MODEL

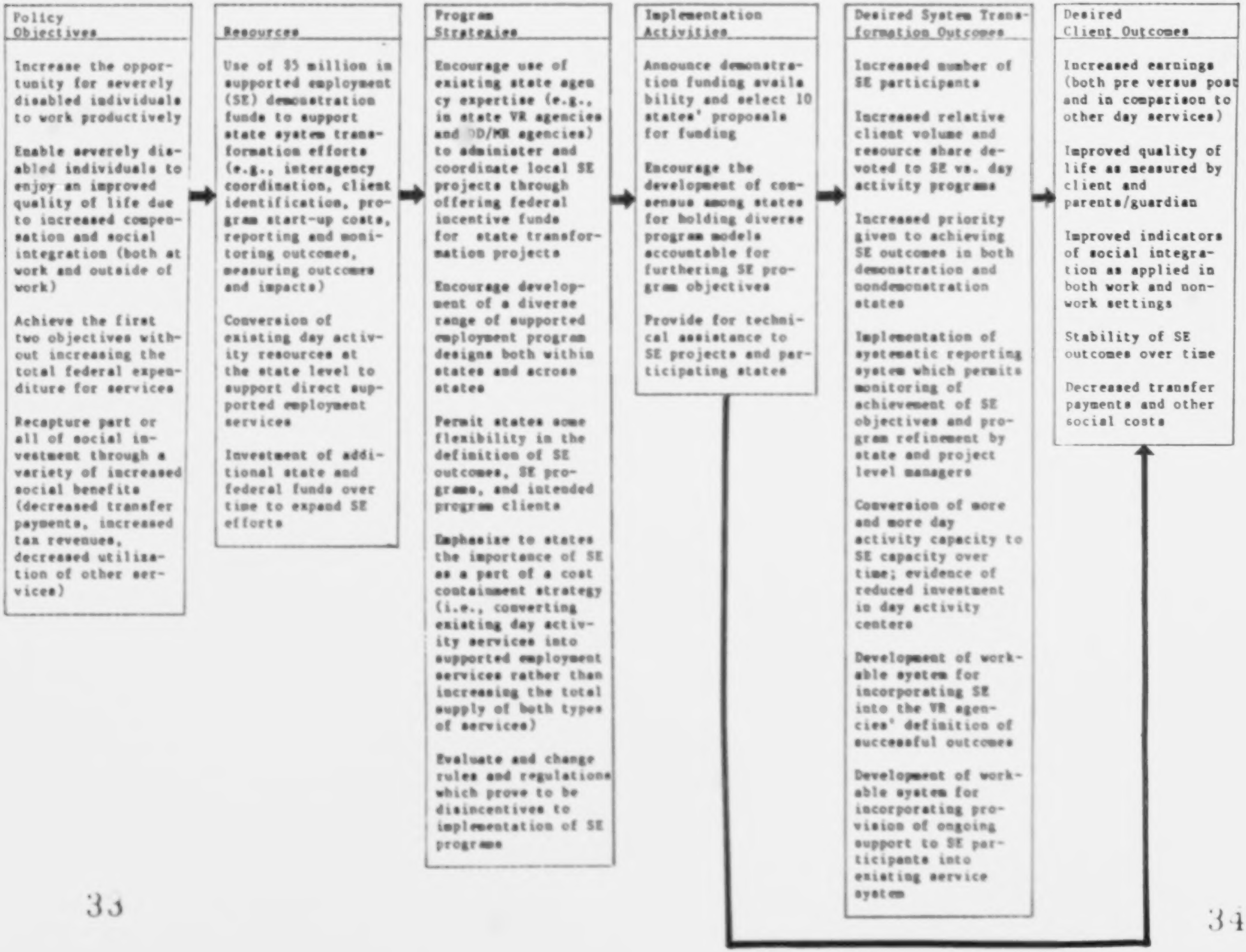
The federal logic model underlying the OSERS Supported Employment initiative, illustrated in Figure 1, is based on federal goals that emphasize (1) system transformation and (2) cost containment. These goals are expressed through an emphasis on promoting supported employment opportunities by reprogramming resources already being used to support day services for severely disabled individuals under existing programs. On the one hand, the Department of Education is clearly committed to advocating for service system changes that will increase the opportunities for severely disabled individuals to work at meaningful jobs, to receive fair compensation for their productive activity, and to enjoy an improved quality of life due to increased earnings and increased social integration. On the other hand, the federal program logic is also closely linked to the goal of cost containment. This goal is expressed first by the absence of any additional federal funding for direct services under the OSERS National Supported Employment Demonstration. The cost containment goal is also expressed in a keen interest in recapturing part or all of the taxpayer investment in supported employment through a variety of taxpayer benefits resulting from program participation (e.g., decreased transfer payments, increased tax revenues, decreased utilization of other services).

The overall strategy identified for the federal supported employment initiative is to encourage and support state system change efforts by:

- encouraging the dissemination of information about supported employment to all interested states;
- providing special demonstration funding for ten states to undertake state transformation projects involving the state agencies with responsibility for administering services to severely disabled individuals;

Figure 1

The Supported Employment Demonstration
A Logic Model for Achieving Federal Objectives



Policy Objectives

Increase the opportunity for severely disabled individuals to work productively

Enable severely disabled individuals to enjoy an improved quality of life due to increased compensation and social integration (both at work and outside of work)

Achieve the first two objectives without increasing the total federal expenditure for services

Recapture part or all of social investment through a variety of increased social benefits (decreased transfer payments, increased tax revenues, decreased utilization of other services)

Resources

Use of $5 million in supported employment (SE) demonstration funds to support state system transformation efforts (e.g., interagency coordination, client identification, program start-up costs, reporting and monitoring outcomes, measuring outcomes and impacts)

Conversion of existing day activity resources at the state level to support direct supported employment services

Investment of additional state and federal funds over time to expand SE efforts

Program Strategies

Encourage use of existing state agency expertise (e.g., in state VR agencies and DD/MR agencies) to administer and coordinate local SE projects through offering federal incentive funds for state transformation projects

Encourage development of a diverse range of supported employment program designs both within states and across states

Permit states some flexibility in the definition of SE outcomes, SE programs, and intended program clients

Emphasize to states the importance of SE as a part of a cost containment strategy (i.e., converting existing day activity services into supported employment services rather than increasing the total supply of both types of services)

Evaluate and change rules and regulations which prove to be disincentives to implementation of SE programs

Implementation Activities

Announce demonstration funding availability and select 10 states' proposals for funding

Encourage the development of consensus among states for holding diverse program models accountable for furthering SE program objectives

Provide for technical assistance to SE projects and participating states

Desired System Transformation Outcomes

Increased number of SE participants

Increased relative client volume and resource share devoted to SE vs. day activity programs

Increased priority given to achieving SE outcomes in both demonstration and nondemonstration states

Implementation of systematic reporting system which permits monitoring of achievement of SE objectives and program refinement by state and project level managers

Conversion of more and more day activity capacity to SE capacity over time; evidence of reduced investment in day activity centers

Development of workable system for incorporating SE into the VR agencies' definition of successful outcomes

Development of workable system for incorporating provision of ongoing support to SE participants into existing service system

Desired Client Outcomes

Increased earnings (both pre versus post and in comparison to other day services)

Improved quality of life as measured by client and parents/guardian

Improved indicators of social integration as applied in both work and nonwork settings

Stability of SE outcomes over time

Decreased transfer payments and other social costs

- encouraging the development of a diverse range of supported employment program models within and across states;
- encouraging states to develop consensus on supported employment program objectives and on how to hold programs accountable for furthering these objectives; and
- attempting to amend any federal rules and regulations that create barriers to the implementation of supported employment programs.

The federal government has undertaken three major activities to implement the above strategies: (1) announcing the supported employment demonstration programs and selecting states to receive project funding; (2) encouraging a consensus-building process on program objectives and performance accountability (coordinated by the BPA study); and (3) providing for technical assistance to the states participating in the Supported Employment demonstration. The desired system transformation outcomes at the federal level include:

- increasing the volume of supported employment participants nationwide, both in absolute terms and as a percentage of all severely disabled individuals participating in publicly-funded programs;
- causing an observable shift in the allocation of public resources from day activity and work activity programs to supported employment programs;
- encouraging the development and implementation of monitoring and evaluation practices that will permit documentation of the achievements of supported employment over time; and
- helping individual states to overcome the organizational problems associated with the implementation of supported employment such as (1) how to change state vocational rehabilitation agency definitions and practices to incorporate supported employment participants into the VR caseload, and (2) how to develop a funding mechanism for

the provision of ongoing support to supported employment participants.

At the federal level, the supported employment logic model also refers to a number of desired outcomes for individual participants, including:

- achieving increased earnings for supported employment participants;
- achieving increased social integration for participants;
- achieving improved quality of life for participants; and
- assisting participants to become independent of public income support.

THE STATE LOGIC MODEL

Not all states have chosen to identify the encouragement of supported employment as a high priority state policy objective. However, an increasing number of states have developed policies and strategies for encouraging supported employment, including not only the initial ten states currently receiving OSERS system transformation grant awards, but also additional states pursuing this program initiative using their own resources and approches. A typical state logic model for supported employment, illustrated in Figure 2, focuses on the organizational, fiscal, and programmatic shifts necessary to transform the service delivery systems and program options available to severely disabled individuals.

From a typical state's perspective, the program's policy objectives are to increase the number of individuals in supported employment while maintaining an integrated coordinated system of services for severely disabled individuals. This system includes service planning, client referral, service funding, and the provision of ongoing support at the state and local levels. The resources available to, and utilized by, different states in developing strategies to further supported employment outcomes vary from state to state, as do the potential strategies.

The basic strategies and activities in the state logic model fall into four categories. These include:

(1) Project Funding and Supervision:

- earmarking a special set-aside pool of federal or state resources for the funding of expanded supported employment projects at the local level,
- actively transforming existing day programs so that they achieve supported employment outcomes,
- replicating existing supported employment models that have proven effective, and
- developing or sponsoring training programs to increase the number of individuals qualified to staff supported employment projects;

(2) Dissemination of Information:

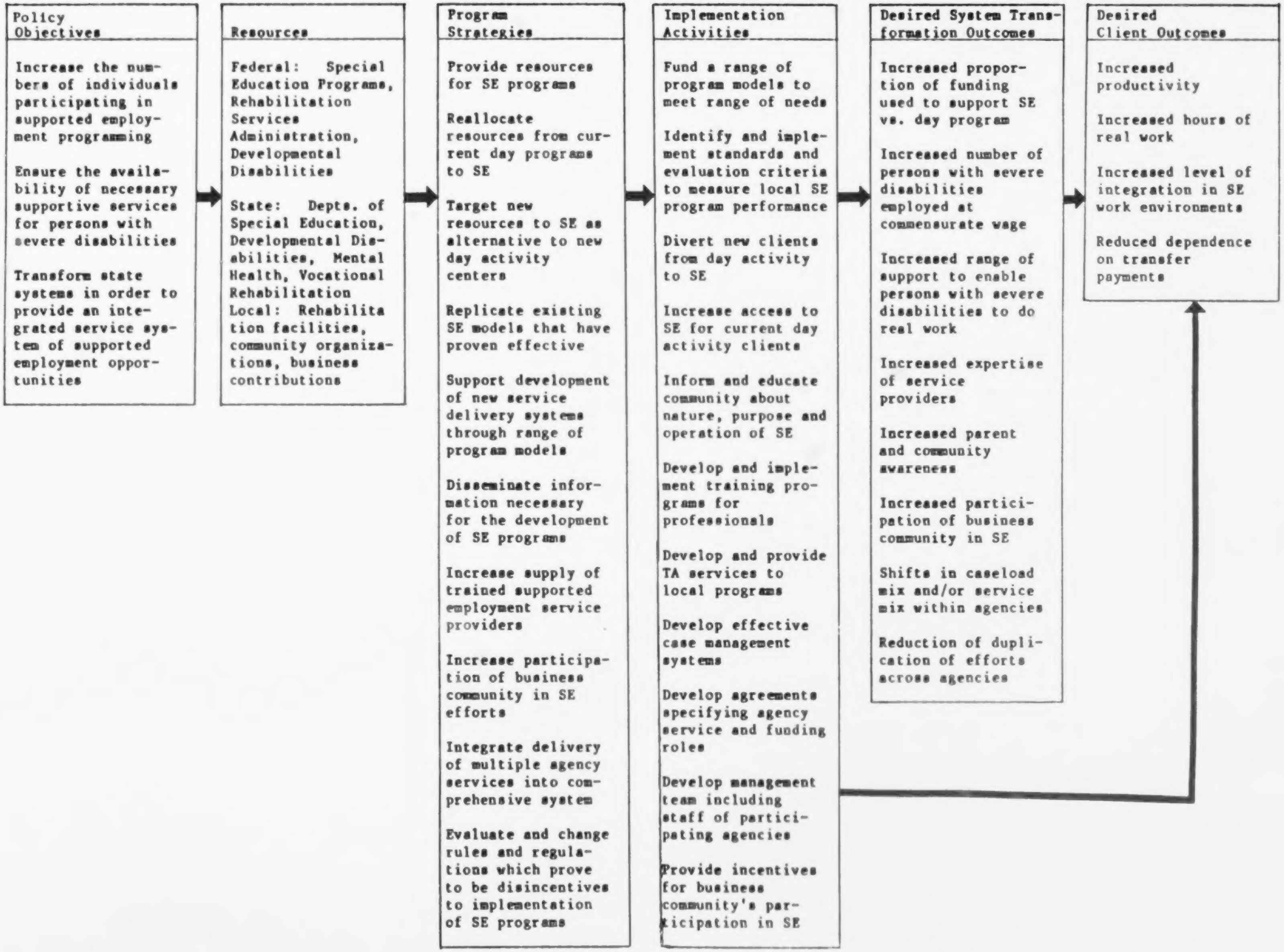
- informing service providers about how to develop supported employment models,
- educating the business community about supported employment concepts,
- informing the community at large about the nature, purpose, and operation of supported employment, and
- developing and implementing data collection, monitoring, and evaluation procedures to document project achievements in furthering program objectives;

(3) Correcting State Regulatory Barriers to Supported Employment:

- changing rules and regulations that are disincentives or barriers to the implementation of supported employment;

(4) Encouraging State and Local Organizational Linkages:

- developing effective case management systems,
- developing interagency agreements about service responsibilities and funding roles,
- developing state or local management teams for the implementation of supported employment including



Policy Objectives

Increase the numbers of individuals participating in supported employment programming

Ensure the availability of necessary supportive services for persons with severe disabilities

Transform state systems in order to provide an integrated service system of supported employment opportunities

Resources

Federal: Special Education Programs, Rehabilitation Services Administration, Developmental Disabilities

State: Depts. of Special Education, Developmental Disabilities, Mental Health, Vocational Rehabilitation

Local: Rehabilitation facilities, community organizations, business contributions

Program Strategies

Provide resources for SE programs

Reallocate resources from current day programs to SE

Target new resources to SE as alternative to new day activity centers

Replicate existing SE models that have proven effective

Support development of new service delivery systems through range of program models

Disseminate information necessary for the development of SE programs

Increase supply of trained supported employment service providers

Increase participation of business community in SE efforts

Integrate delivery of multiple agency services into comprehensive system

Evaluate and change rules and regulations which prove to be disincentives to implementation of SE programs

Implementation Activities

Fund a range of program models to meet range of needs

Identify and implement standards and evaluation criteria to measure local SE program performance

Divert new clients from day activity to SE

Increase access to SE for current day activity clients

Inform and educate community about nature, purpose and operation of SE

Develop and implement training programs for professionals

Develop and provide TA services to local programs

Develop effective case management systems

Develop agreements specifying agency service and funding roles

Develop management team including staff of participating agencies

Provide incentives for business community's participation in SE

Desired System Transformation Outcomes

Increased proportion of funding used to support SE vs. day program

Increased number of persons with severe disabilities employed at commensurate wage

Increased range of support to enable persons with severe disabilities to do real work

Increased expertise of service providers

Increased parent and community awareness

Increased participation of business community in SE

Shifts in caseload mix and/or service mix within agencies

Reduction of duplication of efforts across agencies

Desired Client Outcomes

Increased productivity

Increased hours of real work

Increased level of integration in SE work environments

Reduced dependence on transfer payments

staff of participating agencies and representation from the business community, and

-- identifying priority groups for outreach and enrollment by supported employment projects.

These state-level strategies and activities are intended to bring about some or all of the following desired outcomes: (1) increased community awareness and support for the supported employment concept; (2) an increased number of participants in supported employment, (3) an increased absolute level and/or ratio of program resources devoted to supported employment, (4) an increased variety of supported employment options available to disabled individuals, (5) increased expertise among direct service staff, (6) increased participation by the business community in supported employment, and (7) reduced duplication of effort among state and/or local agencies. In addition, the state logic model also refers to the desired client-level outcomes of increases in employment, earnings, and social integration, and reductions in dependence on transfer payments.

THE LOCAL PROJECT LOGIC MODEL

While the federal logic model is most concerned with system transformation and cost containment, and the state logic model is most concerned with monitoring, training, and establishing organizational linkages, the local supported employment project logic model is focused on the delivery of services to project participants -- i.e., with the identification and implementation of "best practices" in service design and delivery and with the achievement of improvements in the various performance domains or participant outcome areas described in Chapter I.

Figure 3 summarizes the supported employment program logic from the local project perspective. The policy objectives at this level are similar to the overall program objectives described in Chapter I; i.e., providing severely disabled individuals with a choice of meaningful work opportunities whose features include fair compensation, a socially integrated work setting, the necessary support structure to maintain employment, and an increased potential to gain access to social interactions in the community. A final policy objective is to document project accomplishments. For local projects, the available resources include public funds in the forms of demonstration grants, reimbursement for service contracts, private contributions (by local foundations, charitable organizations, parents, and/or employers), and revenues generated by those projects that produce goods or services for sale to consumers.

As shown in Figure 3, the service strategies and activities implemented by projects are tremendously varied. However, the common themes include:

- developing a range of job opportunities to fit participant's needs;
- providing the initial and ongoing support services necessary to achieve general work adjustment as well as to meet specific job skill requirements;
- developing supported employment in a real business environment;
- providing services that maximize participant skills and productivity; and
- developing the capability to measure project effectiveness and participant changes.

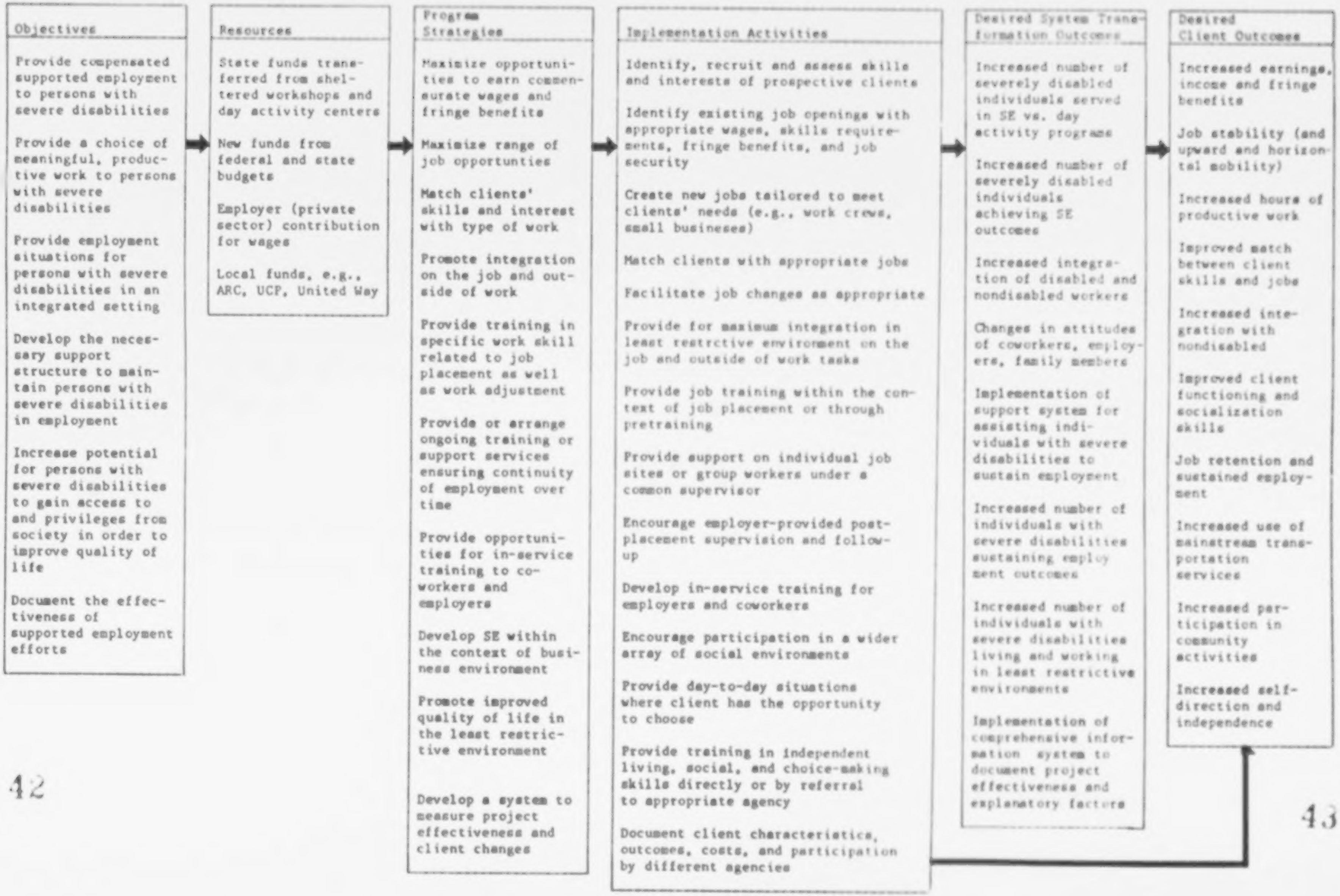
The box entitled "Implementation Activities" in Figure 3 provides examples of the generic project activities that are carried out as these strategies are implemented.

Finally, the desired outcomes of the local project model shown in Figure 3 parallel the basic supported employment objectives described in Chapter I:

- increasing participant employment levels;
- increasing participant earnings;
- improving the job match between participant skills and job requirements;
- increasing job-site and community integration;

Figure 3

The Supported Employment Program Logic Model - Local Project Perspective



Objectives

- Provide compensated supported employment to persons with severe disabilities
- Provide a choice of meaningful, productive work to persons with severe disabilities
- Provide employment situations for persons with severe disabilities in an integrated setting
- Develop the necessary support structure to maintain persons with severe disabilities in employment
- Increase potential for persons with severe disabilities to gain access to and privileges from society in order to improve quality of life
- Document the effectiveness of supported employment efforts

Resources

- State funds transferred from sheltered workshops and day activity centers
- New funds from federal and state budgets
- Employer (private sector) contribution for wages
- Local funds, e.g., ARC, UCP, United Way

Program Strategies

- Maximize opportunities to earn commensurate wages and fringe benefits
- Maximize range of job opportunties
- Match clients' skills and interest with type of work
- Promote integration on the job and outside of work
- Provide training in specific work skill related to job placement as well as work adjustment
- Provide or arrange ongoing training or support services ensuring continuity of employment over time
- Provide opportunities for in-service training to coworkers and employers
- Develop SE within the context of business environment
- Promote improved quality of life in the least restrictive environment
- Develop a system to measure project effectiveness and client changes

Implementation Activities

- Identify, recruit and assess skills and interests of prospective clients
- Identify existing job openings with appropriate wages, skills requirements, fringe benefits, and job security
- Create new jobs tailored to meet clients' needs (e.g., work crews, small businesses)
- Match clients with appropriate jobs
- Facilitate job changes as appropriate
- Provide for maximum integration in least restrctive environment on the job and outside of work tasks
- Provide job training within the context of job placement or through pretraining
- Provide support on individual job sites or group workers under a common supervisor
- Encourage employer-provided post-placement supervision and follow-up
- Develop in-service training for employers and coworkers
- Encourage participation in a wider array of social environments
- Provide day-to-day situations where client has the opportunity to choose
- Provide training in independent living, social, and choice-making skills directly or by referral to appropriate agency
- Document client characteristics, outcomes, costs, and participation by different agencies

Desired System Transformation Outcomes

- Increased number of severely disabled individuals served in SE vs. day activity programs
- Increased number of severely disabled individuals achieving SE outcomes
- Increased integration of disabled and nondisabled workers
- Changes in attitudes of coworkers, employers, family members
- Implementation of support system for assisting individuals with severe disabilities to sustain employment
- Increased number of individuals with severe disabilities sustaining employment outcomes
- Increased number of individuals with severe disabilities living and working in least restrictive environments
- Implementation of comprehensive information system to document project effectiveness and explanatory factors

Desired Client Outcomes

- Increased earnings, income and fringe benefits
- Job stability (and upward and horizontal mobility)
- Increased hours of productive work
- Improved match between client skills and jobs
- Increased integration with nondisabled
- Improved client functioning and socialization skills
- Job retention and sustained employment
- Increased use of mainstream transportation services
- Increased participation in community activities
- Increased self-direction and independence

- increasing participant productivity and socialization skills;
- facilitating job stability/mobility, according to participant desires;
- increasing participant self-direction and independence; and
- increasing the number of severely disabled individuals in supported employment.

In addition, the local project logic model includes as a desired outcome, the generation of ongoing data to document project effectiveness and to assess the effectiveness of different service practices.

CONCLUSION

The descriptions of the federal, state, and local project logic models are useful in the development of performance measures to document the achievements of supported employment. First, similarities across the three models reassure us that, in fact, the federal, state, and local project perspectives on supported employment are mutually reinforcing: they are oriented towards achieving a consistent set of desired outcomes. Second, the variations from model to model remind us that actors at various levels are likely to phrase program objectives and desired outcome measures slightly differently, because of their distinct outlooks. These differences are based on differences in priorities among objectives, differences in the level of generality or specificity of interest in the details of project operation and participant outcomes, and differences in the focus on client-level or system-level change measures.

In the next chapter, we will see how the different perspectives on program objectives and strategies lead to a variety of different questions about supported employment outcomes that provide the framework for designing data collection systems to document program accomplishments and analyze program performance.

III. ASKING QUESTIONS ABOUT PERFORMANCE

POTENTIAL USERS AND USES OF INFORMATION ABOUT SUPPORTED EMPLOYMENT

The potential users of information about the accomplishments of supported employment include a variety of actors, including:

- federal and state policy makers interested in whether the supported employment initiative is accomplishing its goals;
- state and local administrators interested in whether system transformation is occurring and, if so, its related cost and service impacts;
- program operators interested in tracking project resources and services provided to participants, and in refining service designs to maximize project effectiveness, as well as assessing the outcomes of services for participants;
- consumer groups, and individual parents and participants interested in expanding community-based employment options and in choosing the best program for themselves or their children with disabilities;
- employers who may be considering hiring a supported employment participant, or sponsoring a supported employment group worksite; and
- program analysts interested in tracing the net impacts of the investment in supported employment from the participant and taxpayer perspectives, as well as in analyzing the factors influencing project effectiveness.

Each of these individuals or groups is interested in reviewing the accomplishments of supported employment efforts. Some users are primarily interested in outcomes at the local project level, while others are interested in local system or state system outcomes, or in aggregate national statistics. Each of these different information users has a stake, then, in the collection and reporting of data that will address their concerns. In Part II of this report, we summarize implementation alternatives for generating the data at the project and system levels that will address the interests of the users described above. In the remainder of this chapter, we review some of the performance questions to which different audiences are seeking answers.

TYPES OF PERFORMANCE QUESTIONS

There are three different types of performance questions that can be asked about supported employment: (1) questions asking for descriptive information; (2) questions asking for comparative assessments; and (3) questions asking for explanatory analysis.

Questions asking for descriptive information are the first step in documenting program performance. Examples of these questions include:

- How many participants are being served?
- What were they doing immediately prior to entering supported employment?
- What types of jobs are they obtaining?
- What types of support are being offered on an ongoing basis?
- How much do participants earn?
- How much social interaction between disabled individuals and their nondisabled coworkers occurs on supported employment job sites?

The second type of question about program performance asks for an assessment of the descriptive information based on some external or internal reference point. There are several possible sources of reference points: (1) the previous situation of participants (prior to entering supported employment), (2) any stated policy objectives about desired program outcomes, (3) the experience of other supported employment projects, (4) the shifts in the performance over time of a given project or participant, and (5) for more extensive evaluations, the experience of comparison or control group that indicates what outcome would have occurred in the absence of supported employment. Samples of these types of performance questions follow, using the topic area of participant earnings as an an illustrative example:

- Are participant earnings greater than earnings received by the same individual prior to entry into supported employment?
- Are participant earnings consistent with stated project goals?
- Does the distribution of earnings achieved by one supported employment project compare favorably to that achieved by other projects?
- Do participants' earnings increase over time after an individual enters a supported employment project?
- Does participation in supported employment result in a net increase in earnings for the participant over what he or she would have earned in the absence of supported employment?
- Does participation in supported employment result in a net increase in disposable income for the participant?

The third type of question about program performance -- requests for explanatory analysis -- is concerned with observing and explaining the variations in the performance outcomes of individuals and/or projects. These variations may be based on the influence of fixed factors (e.g., features of the labor market environment, client characteristics) or they may be influenced by program design that are susceptible to change or refinement in response to research findings (e.g., techniques for imparting job skills or social skills; types of jobs developed by the project). Examples of this type of question:

- What effect does the local labor market environment have on the earnings levels achieved by supported employment participants?
- What effect do the types of industries and occupations targeted by the projects have on the earnings levels achieved by supported employment participants?

- What changes in project service strategies might enable participants to achieve higher earnings?
- How do earnings vary for participants with different types of disabilities?

Although all three types of questions can be asked simultaneously, there is usually a clear progression over the development and assessment of any social program, from an emphasis on descriptive questions, to an emphasis on comparative and analytic questions. During the initial stages of program implementation it is usually important to provide answers to basic questions about what services the program is providing, to whom, and with what results. In data collection efforts at this stage there is also usually a transitional start-up phase during which consistent definitions, data items, and data collection procedures are developed and refined.

Once the initial start-up phases of program operation and data collection are over, then the more complicated and evaluative performance questions can be asked, and performance expectations can begin to develop based on program experience about what levels of performance are likely to occur under what conditions. Simultaneously, analyses of variations in outcomes can be used to identify practices that appear to increase project effectiveness, and dissemination of information about "best practices" can begin to occur.

Although individual supported employment projects have been underway for a number of years in different service sites throughout the nation, supported employment is just beginning to receive high visibility nationally as a program alternative for severely disabled individuals. Thus, during the next several years, it can be expected that supported employment performance questions will be primarily oriented towards evolving a consistent basis of descriptive information about the program. These descriptive data will be essential in order to provide a foundation for subsequent assessments of program effectiveness. It is the goal of this report to offer a solid set of options for the initial descriptive phase, as well as to establish a conceptual framework to guide comparative and analytic assessments of the supported employment strategy.

PERFORMANCE QUESTIONS

In summarizing the different questions asked about supported employment by different groups and individuals, we have found that the range of performance questions fell into ten clusters. These clusters include questions about:

- compensated work;
- meaningful work;
- ongoing support;
- worksite integration;
- quality of life;
- participant characteristics;
- systems change and community change;
- costs;
- environmental factors; and
- best practices.[1]

Below, a variety of key performance questions are listed under each grouping.

Questions About Compensated Work

Figure 4 summarizes the key questions about compensated employment outcomes and briefly describes what uses might be made of answers to these questions by supported employment observers, administrators, and operators at different levels. These questions focus on four different aspects of employment outcomes:

- How many participants are employed?
- What are their earnings levels?
- How many hours do they work in a given period (week or month)?
- How stable is their employment?

A final set of evaluation questions includes:

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Figure 4

Performance Questions and Potential Users: Compensated Work

Performance Questions	Potential Users
(1) How many participants obtain paid employment? A. How many participants achieve supported employment outcomes (as federally defined)? B. How many participants obtain any paid employment? C. What portion of participants are successfully served?	These questions address the "bottom line" of program success and provide a summary of project- and state-level performance. This information is useful for tracking state and project progress over time and can be used for cross-state and cross-project comparisons.
(2) How much do participants earn? A. What is the level of participants' earnings? B. What fringe benefits do participants receive? C. Are earnings a substantial portion of participants' income? D. How do participants' earnings compare with those of co-workers or other employees in comparable jobs?	Earnings are an important measure of program outcomes and are of particular interest to state and federal policy makers concerned with the effectiveness of supported employment as an alternative to traditional habilitation programs. At the project level, earnings are an indicator of individual levels of achievement.
(3) How much do participants work? A. How many hours per week do participants work? B. How many hours do participants work overtime? C. What portion of participants' time in program is spent in productive work?	One concern about traditional programs has been their difficulty in providing an adequate amount of work for their participants. Maximizing the amount and proportion of productive work is highly valued by promoters of supported employment. Also, the federal definition requires a minimum of 20 hours per week to qualify as a supported employment outcome. Many individuals may qualify as having achieved a supported employment outcome except for the minimum hours requirement. Tracking the full impact of supported employment programs as well as any potential refinements to the definition requires tracking the actual number of hours that participants work.
(4) What is the duration of employment?	Given the nature of the target population and the anticipated long-term nature of support provided, expectations for improvement over time may be inappropriate. However, since the program is new, collection of data on changes over time can provide policy makers with critical information about program outcomes and long-term trends. Program operators will use this information at the client level to track individual progress over time, an important aspect of the case management function. Also, in addition to individual changes over time, project-level progress can also be tracked as projects are more successful in their job development and job matching techniques.
(5) How do employment status and earnings change over time?	Employment stability is an important measure of program success at administrative and policy levels, especially at an aggregate level where overall trends can be observed.

Figure 4 (continued)

Performance Questions	Potential Users
(6) How do employment outcomes compare with those of traditional habilitation and day activity programs?	This is one of the questions of state and federal policy makers and can have a major influence on level of commitment to system-wide change.
(7) How does the level of earnings affect employment stability (duration/retention)?	This is a research question that can assist in refining program design as programs weight the tradeoffs between various advantages of potential employment opportunities.

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- How do participant outcomes change over time?
- How do outcomes of supported employment programs compare with other programs?
- What is the relationship between earnings and employment stability?

Questions About Meaningful Work

Figure 5 describes various questions about the quality of placement and their particular interest to federal, state and local project actors. Several of the questions address descriptive topics including:

- What kind of jobs do supported employment participants hold?
- When they leave a job, what are the reasons for termination?
- Where do individuals go after termination from a supported employment program?

Other questions ask: (1) How good is the participant-job match? (2) How does the quality of placement affect other supported employment outcomes? and (3) What is the long-range employment mobility of participants? These questions more appropriately fall within the scope of an evaluation effort, than as part of a project's ongoing monitoring system.

Questions About Ongoing Support

As shown in Figure 6, there are several different kinds of questions about ongoing support that are of interest to federal, state, and local-level audiences. One kind of question asks for summary descriptions of the role of ongoing support within a given project model, in order to make comparisons across different models as well as to observe how much variation exists within a given project or type of projects. These questions include:

- What types of ongoing support are provided to participants in supported employment?
- Who provides the ongoing support?

Figure 5

Performance Questions and Potential Users: Meaningful Work

Questions	Users
(1) In what kind of jobs are participants being placed?	For state and federal observers and project administrators these descriptors provide a picture of overall job development and placement activities, including: (1) the range of industries and jobs; (2) the potential for labor market saturation; and (3) the possibility of stereotyping or limiting of participant employment options. These descriptors also prepare federal and state observers and project-level administrators for assessing how different employment situations and project models affect outcomes (e.g., longevity of employment, earnings, stability, etc.). Case managers could use these descriptors to assess project-participant match prior to purchasing services. For project staff, particularly job developers and job coaches, this information is useful for: (1) identifying current and future range of targeted employment opportunities; (2) assessing jobs which are most beneficial for participants; and (3) remaining responsive to the local labor market. In addition, this information can be useful to employers as a description of a program's current market.
(2) Are programs providing appropriate kinds of work for participants? (participant-job match)	Case managers, project staff and consumers would use this descriptor to assess whether client-job matches are appropriate and sufficiently challenging for the participant, based on task-skill match. State and federal observers, and program administrators, would use this information to assess project performance and changes in client activity over time.
(3) Why do participants terminate from jobs? from SE program? (4) Where do participants go after terminating from jobs? from SE program?	In order to assess participant flow patterns and changes in overall service systems, federal and state observers and program administrators would use this descriptor to track numbers of current and former SE participants. In addition, it provides a useful mechanism for observing the evolution and implementing the refinement of practices, strategies and models. Case managers and project staff would use this descriptor to: (1) track client movement through the system; (2) assess the most appropriate "next step," and (3) refine skills necessary to assist participants. This information will also be useful to job developers in developing strategies for marketing supported employment to employers.
(5) To what extent does the quality of the placement influence SE stability/duration?	The findings of this research question would be useful to program administrators for understanding the factors associated with improving program performance.
(6) To what extent do participants have the opportunity to move from one employment situation to another over time?	This is a research issue which tests the mobility potential and actual occurrences of job movement in SE placements with the hypothesis being that job mobility is as desirable an option for workers with severe disabilities as it is for their nondisabled co-workers.

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Figure 6

Performance Questions and Potential Users: Ongoing Support

Questions	Users
1. What types of ongoing support are provided to participants? (at the work place versus outside the work place; directly work-related versus broader community adjustment support)	For state and federal observers of the supported employment demonstration, these descriptors are useful for understanding how project models differ regarding the provision of ongoing support.
2. Who provides the ongoing support to participants and who pays for the ongoing support to participants?	For project administrators, these descriptors are useful for understanding how the provision of support varies for different clients.
3. How much support is being provided?	
A. What is the mean amount of ongoing support received by the average project participant (in time and in cost)?	For project models that can identify ongoing support as a separate program element, these descriptors prepare federal observers, and state and project-level administrators to assess (1) the portion of total operating costs devoted to ongoing support; and (2) the relation between the public costs of support for an individual client versus the earnings or taxpayer benefits generated by the employment of that client.
B. What are the variations in the amounts of ongoing support received by supported employment participants?	
4. How do the amounts of ongoing support to a given individual change over time? (Is this a model that emphasizes fading of support, or is it a steady state model?)	This descriptor would be useful to case managers tracking individual clients' progress, as well as to observers interested in understanding the features of a given project. Issues related to client longevity will be critical for evaluating the long-term benefits and costs of the supported employment program.
5. What portion and what types of work-related support received by supported employment participants are publicly funded (versus provided at no charge or purchased by the participant)?	This is a research concern that tests the limits of supported employment as utilizing publicly funded support. If extensive non-publicly funded ongoing support is revealed, there may be reasons to expand the definition of supported employment, or to de-emphasize the distinction between supported employment programs and transitional employment programs.
6. How does support influence outcome?	
A. How does the type and amount of ongoing support appear to influence the job longevity, job satisfaction, life satisfaction, and skills levels of supported employment participants?	This research concern will enable federal observers, and state and project-level administrators to assess the relative importance of different types of ongoing support in enhancing desired project outcomes.
B. To what extent does provision of ongoing support that is not directly work-related influence the work success and work longevity of supported employment clients?	This is also a research concern to test the current operational definition of support as directly work-related support. If other kinds of support are found to have a dramatic effect on job success, there may be reasons to expand the types of ongoing support that are (a) offered, and/or (b) tracked.

- Who pays for the ongoing support?

A second set of questions attempts to arrive at quantitative measures of the intensity and costs of ongoing support. As described in Figure 6, these questions ask:

- What portion of a supported employment program's total staff time and costs are devoted to ongoing support?
- How do the ongoing costs of supported employment compare to the ongoing earnings (and ultimately taxpayer benefits) generated by the employment of project participants?

A third set of questions identifies research issues that might ultimately feed back into refinements of the supported employment initiative but, in the short run, would probably not be part of continuous program monitoring. These questions include:

- How does the level of ongoing support provided to individual participants change over time?
- What portion of the ongoing support received by participants is actually publicly funded, versus provided at no charge by relatives, employers, or coworkers?
- What is the impact of providing various types and levels of ongoing support on desired project objectives such as employment longevity, job satisfaction, life satisfaction, and skill levels of participants?

Questions About Worksite Integration

As shown in Figure 7, there are three key questions that have been asked about the integration aspects of supported employment programs: (1)What is the extent of integration at the work site (to what extent are supported employment participants placed in job sites with nondisabled coworkers?) (2) How much social contact or interaction occurs between disabled and nondisabled workers? and (3) What is the effect of worksite integration on community integration and other participant outcomes? Further exploration of the role of integration in

Figure 7

Performance Questions and Potential Users: Worksite Integration

Performance Questions	Potential Users
(1) To what extent are participants in mainstream work environments with nondisabled coworkers?	For project-level administrators and state and federal observers, information about the extent of desegregation or proportional mix of disabled and nondisabled workers is essential to monitoring the shift from more traditional segregated work and day treatment settings.
(2) To what extent do supported workers interact with nondisabled coworkers?	In addition to state and federal policy interest in integration, case managers and service providers can use this information to monitor participants' progress. It also can be useful in comparing the quality of place ments offered by different employers to assist in job matching.
(3) How does social integration at the worksite affect community integration and other outcomes, such as job satisfaction, living skills, etc.?	These research question can shed additional light on the value of social integration at the worksite and assist project and state administrators in refining their service approaches.

supported employment programs, once they have been operationalized over a longer period, may clarify additional performance questions to be addressed.

Questions about Quality of Life

While Figure 8 depicts the various questions about quality of life useful to federal, state, and project level audiences, the participants themselves will be the main focus of this measurement area in terms of the identification and importance of changes in individual lifestyles and participant attitudes. Federal and state observers, along with program administrators, will be looking at overall trends in living status, involvement in community activities, and skill development as supported employment programs move participants from segregated environments into community-based employment. Those with more direct participant contact will be interested in tracking these changes on an individual basis in order to refine program activities and identify areas of growth. However, questions about quality of life provide participants with the opportunity to give direct feedback to all levels of program implementors on the daily life impacts of supported employment.

Questions About Participant Characteristics

There are four basic questions that have been asked about participants' characteristics, as illustrated in Figure 9. They include:

- What are the characteristics of participants in supported employment?
- How do these characteristics relate to the stated project, state, or federal goals or objectives, about the desired groups to be reached by supported employment?
- How do the characteristics of participants who achieve supported employment outcomes differ from the characteristics of enrollees who do not achieve supported employment; and
- How do specific participant characteristics (and combinations of characteristics) influence client-level outcomes

Figure 8

Performance Questions and Potential Users: Quality of Life

Performance Questions	Potential Users
(1) How have the living arrangements of the participants changed since project entry? (2) Has participant use of public transportation changed? (3) How has the overall community presence/participation of participants changed over time?	These descriptions would indicate overall trends in the independent living status, skills, and community involvement levels of supported employment participants. Program staff and case managers would be particularly interested in tracking this information on an individual basis over time. State and federal observers, researchers, and program administrators would use this information to indicate other possible outcomes and benefits of supported employment.
(4) What are the changes over time in participants': • utilization of other support services? • family/caregiver attitudes about employment, independent living, and community involvement? • ability to make independent decisions? • degree of self-esteem? • health status? • use of leisure time? • expendable income? • living skills, behavior, mobility, cognition, job skills, and communication skills?	Again, these descriptors can be useful both as a general picture of overall state and federal shifts occurring during supported employment programming and as an indicator of individual participant evolution. These questions also encourage the development of a format for gathering information directly from participants and significant others.
(5) What are the benefits (disadvantages) of increases (decreases) in participants' expendable income?	This is a research concern which will also be critical to other levels of involved audiences as benefits to supported employment participants are assessed. Policy makers on state and federal levels will be particularly concerned with this descriptor as the costs and benefits of shifts in program dollars are assessed. On an individual project basis, this could be useful for tracking participants' changes in quality of life over time.

Figure 9

Performance Questions and Potential Users: Participant Characteristics

Questions	Users
(1) What are the characteristics of project enrollees?	The preparation of descriptive profiles of participant characteristics will be of interest to all observers and operators of supported employment projects to answer questions about what disability groups are being served, what previous services individuals had been utilizing, etc. Additional related issues are what groups are not accessing supported employment and how client characteristics are changing over time.
(2) How do observed enrollee characteristics relate to program or project goals and objectives? A. Are participants appropriate? B. Do participants reflect high priority target categories?	At each level of government or project administration where formal or informal service goals have been established, an examination will be made of the appropriateness of the enrolled participants: do they, in fact, have severe disabilities? Are they, in fact, diverting participants from work activity centers? etc.
(3) How do the characteristics of participants who achieve and sustain supported employment differ from the characteristics of participants who do not achieve supported employment?	In order to determine whether project models are equally effective with all types of participants, researchers, program operators, and state and federal policymakers will be interested in carefully examining the characteristics of the clients who are least successful in each type of project.
(4) How do specific client characteristics influence achievement of different client-level outcomes (e.g., employment and earnings levels, job quality and life quality)?	This is the issue that is critical before an across-the-board comparison can be made of the relative effectiveness of different projects, different types of projects, and different state programs: how should performance expectations be adjusted to take into account variations in the characteristics of participants from one project to another?

(e.g., employment and earnings levels, job quality, and life quality measures)?

Ultimately, research may enable observers of supported employment programs to develop a summary measure of "expected participant difficulty" for each enrollee in supported employment that reflects the statistical association between various participant characteristics and observed outcome levels for previous client cohorts. If such a summary measure or index proves feasible, comparisons of performance over time and across projects could be greatly simplified.

Questions about Community Change and Systems Change

Those particularly interested in systems change questions, as shown in Figure 10, will be state and federal observers, policy makers, and program planners. When looked at from a local perspective, these questions also have significance to regional and community administrators and project staff. The questions ask: (1) What changes have occurred in the service delivery system at the state and local levels? (2)Have the intended supported employment objectives been achieved? (3)What are the quantifiable results of supported employment outcomes systemwide? (4) What is the impact of supported employment on funding flow and participants flow? and finally, (5) Are current service delivery mechanisms adequate given the influence of supported employment programming? The latter two questions are research issues which may ultimately address the need for more extensive systems change.

Questions About Supported Employment Costs

Figure 11 summarizes the key questions about supported employment costs and briefly describes what uses would be made of these questions by supported employment observers, administrators, and operators at different levels. The first set of questions asks: how are supported employment projects funded and what constraints do different funding sources place on project operations? The second set of questions asks: What are the "typical" costs of providing supported employment and how much variation exists in providing supported employment opportunities

Figure 10

Performance Questions and Potential Users: Systems Change

Performance Questions	Potential Users
(1) What are the variations in intended systems change for: • increased volume of supported employment outcomes? • increased proportion of supported employment outcomes to the total system? • increased range of jobs available? • overcoming barriers and creating incentives?	For federal observers, this descriptor will be useful for understanding overall and comparative system transformation across states based on the intended objectives of the supported employment initiative.
(2) What is the volume of supported employment outcomes? A. What is the volume of supported employment outcomes over time? B. To what extent is supported employment an addition to or a replacement for current programming? C. What portion of the population who could benefit from supported employment are being served? (3) What is the flow of money -- who is paying for what and how does that change over time?	State policy makers and program planners will use these descriptors to assess (1) how supported employment has restructured previous programming and (2) how many of the target population has been served. For program administrators, these will be key descriptors in targeting appropriate participants for appropriate services.
(4) What influence has the supported employment initiative had on the service delivery system over time? A. What are the changes in service delivery mechanisms over time for: • case management procedures? • rate setting structures? • documentation/monitoring? • ability to provide ongoing support? • referral mechanisms? • interagency mechanisms? B. What are the changes in the flow of participants over time?	In order to capture the range of system change impacts on state service delivery mechanisms, funding streams, and participant flow patterns, state policy makers and state-level program planners will need to have specific descriptive and quantitative information on the changes and/or long-term trends occurring as a result of supported employment programs. More specifically, these descriptors will assist in short- and long-range planning efforts in states and across states, as well as providing a pool of comparative information on best practices.
(5) What is the extent of systems change at the local community level? A. What changes are occurring locally in the service deliviery system in areas such as referral structures, interagency coordination, and sources of funds to pay for ongoing support? B. Are there chances in the hiring practices of local employers?	For local program administrators, case managers, and project staff, it will be critical to assess trends in both the public sector and the private sector in order to expedite service delivery and job placement efforts.

Figure 10 (continued)

Performance Questions	Potential Users
(6) What is the relationship between changes in funding flow and participant flow? A. How do the changes in the flow of the money affect the flow of the participants through the system? B. How do the changes in the flow of participants affect the flow of the money through the system?	This is a research concern which will provide information on whether participants are following the funding streams or the funding streams are following the participants over time.
(7) Is there a need for a centralized outreach and assessment mechanism?	This also is a research concern as federal and state observers and local project administrators look at coordination efforts over time and assess the most effective ways to restructure service delivery systems for persons with severe disabilities.

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Figure 11

Performance Questions and Potential Users: Supported Employment Costs

Performance Questions	Potential Users
(1) What funding sources are being used to support the operation of supported employment projects at the local level (including revenue produced by project activities)? For projects that have access to more than one funding source, how are funds from different sources coordinated? (e.g., funding allocated by client, funding allocated by activity).	For federal observers and state administrators, analyzing the flow of funds to program operators is essential for understanding the fiscal constraints on the program, as well as the requirements imposed by each funding source regarding clients to be served, or limits on the timing, scope, or objective of services.
(2) What is the cost of one month of supported employment for one participant? A. What is the cost of one month of supported employment for a typical participant? B. How do monthly costs vary • by project? • by program model? • by client characteristics? • by length of time in program?	At all levels, from federal policy makers to state administrators, to local coordinating councils and local supported employment projects, information about the typical costs and the range of variation in costs for different types of participants in different types of supported employment models will be used to set expectations for individual performance and to compare different projects and different models. Ultimately, an assessment of variations in costs will also set the state for a comparison of the net benefits of alternative models.
(3) How are project costs allocated across different types of activities, such as: • general administration? • community outreach, education, and advocacy? • client-intake assessment, job match? • direct client supervision/training/ongoing support? • client specific casework and advocacy? • generalized job development? • purchase of outside services for clients? • evaluation/record keeping? • revenue-producing activities (including cost of wages paid for work performed)?	The primary users of this detailed analysis of project activities will be project managers themselves, as well as state monitors, in order to assess: (1) how project resources are being allocated; (2) how these expenditure patterns are changing over time; and (3) what apparent effect the investment in different activities has on measure of project effectiveness and cost-effectiveness.
(4) What are the net fiscal impacts of supported employment from the taxpayer perspective? A. What are the average monthly reductions (increases) in transfer payments resulting from participation in supported employment? B. What are the average monthly reductions (increases) in the cost of social services utilized as a result of participation in supported employment? C. What are the average monthly increases (reductions) in tax revenues paid as a result of participation in supported employment?	The questions of net fiscal impacts require extensive investigations of the indirect outcomes experienced by individual supported employment participants, as well as tracking the experiences of a control or comparison group who did not enter supported employment. For this reason, they will not be of day-to-day interest to program administrators. However, program managers and policy makers at all levels will be vitally interested in what research reveals about the relationships between their direct outcome monitoring measures and net impact estimates. Specifically, decisions made by program policy makers about client targeting will lean heavily on research findings about which types of participants (1) create the greatest net taxpayer return; and (2) experience the greatest personal financial benefits from participation in supported employment.

Figure 11 (continued)

Performance Questions	Potential Users
(5) From the participant perspective, what are the net financial impacts of supported employment? A. What are the increases (decreases) in uncompensated monthly work expenses associated with participation in supported employment? B. What are the increases (decreases) in expendable income associated with participation in supported employment (increased earnings minus taxes minus reductions in transfer payments)	See the comments under 4, above.
(6) How do the mean monthly costs of supported employment compare to the mean monthly costs of other day programs which serve a similar client population?	The users of these questions and answers will be any actors at the federal or state levels who are primarily interested in systems transformation, that is, in reallocating existing and planned new investments in day services for the target population so as to realize the greatest taxpayer and client benefits. The first step is to compare costs of alternative or complementary services.
(7) How do the estimated mean monthly taxpayer and participant benefits of supported employment compare to the mean monthly benefits generated by other programs which serve a similar client population?	The second step is to compare the taxpayer benefits generated by alternative or complementary services.
(8) How do the estimated monthly project costs and taxpayer benefits vary across different supported employment projects and types of projects? (9) How do the estimated net financial benefits of supported employment from the participant perspective vary across different types of supported employment projects?	Finally, researchers and policymakers will be interested in understanding the variations in supported employment costs and benefits as they interact with variations in participant characteristics and service approaches over time. Ultimately, research may reveal that certain models have a cost advantage for certain types of participants.

via different project models to different types of participants? The third set of questions, which will be of particular interest to project managers themselves, ask about the costs of the distinct activities funded under supported employment.

Three final question areas concern (1) developing estimates of the net fiscal impacts on the taxpayer of operating supported employment programs; (2) developing estimates of the net financial impacts on the individual participants of supported employment programs; and (3) comparing the marginal costs and benefits of investing additional funds in supported employment versus alternative or complementary services.

ADDITIONAL QUESTIONS

The clusters of performance questions described above offer a range of performance questions which can be used at state and federal policy levels to monitor program performance and which can also be used by state and local administrators to monitor their own progress. These indicators also provide the basic framework for conducting a more comprehensive evaluation effort. However, in addition to the eight domains above, there are a number of other performance questions that we recommend for inclusion in future performance evaluations. These include: (1) What are the practices and procedures associated with program success? and (2) How do external and environmental factors influence supported employment outcomes? These performance questions are not presented here in the same level of detail as the eight domains above. The specification of data elements and specific performance measures in these areas are perhaps premature and would emerge during the development of a detailed evaluation design. The users and uses of information are essentially the same across these additional performance questions. Evaluation information will be useful to state and federal policy makers and state and local administrators in refining the supported employment service delivery approach. A comprehensive understanding of what works and why it works may lead to revisions in the definition of supported employment and state and federal implementation and funding policies.

Questions About Best Practices

One of the major objectives of any program evaluation effort is to produce information that can lead to improvements in program design and implementation. Evaluation of practices and procedures contributing to success would include such questions as:

- How do various practices and procedures differ between supported employment programs and more traditional vocational and day activity programs?
- How do the characteristics of program operators seem to affect outcomes (e.g., type of agency, history and experience, organizational structure and staffing)?
- Which models and approaches seem to work best for different types of participants?
- Which models and approaches seem to work best for different kinds of local conditions (e.g., urban versus rural, different kinds of labor markets)?
- Are there different specific "best practices" that seem to work well across different models and populations (e.g., participant assessments, job match techniques, job coaching and training techniques, case management and follow-up procedures, funding mechanisms, interagency coordination)?
- What is the relationship between different outcomes (e.g., earnings, employment stability, integration) and different program models?
- How do the different outcomes relate to each other? What are the trade-offs between maximizing earnings, hours of and degree of integration? How do these relate to levels of support provided and program costs?
- What are the qualifications of program staff and what kinds of training do they participate in? What are the training needs of different actors in the supported employment service system?
- What are the roles of various actors in the supported employment program (e.g., state and federal policy-

makers, universities, consumer groups, service provider organizations, etc.)? How do shifts in leadership occur as the program matures, and how do these shifts influence philosophy and policies in the field?

Questions About External Factors

There are a variety of factors likely to influence outcomes that are not under the control of the supported employment program itself. An assessment of how these factors affect outcomes is essential to a comprehensive understanding of program performance. Should any of these factors prove to have strong relationships with specific program outcomes, at some future time it might be desirable to include such factors in the ongoing comparative assessment of program performance. Such an approach might include weighting outcomes according to specific factors in order to take into account differences in local environments when comparing one program to another.

A number of different factors have been identified to date as being likely to affect performance to some degree. These include:

- work/income disincentives, such as potential loss of SSI and medical benefits;
- local labor market characteristics and the availability of suitable jobs;
- local economic conditions and feasibility of creating new jobs and business ventures;
- general economic trends and conditions in the state or nation as a whole;
- local service environments (service rich or service poor) and the availability of adjunct support services for community living and personal/social needs; and
- cooperation from other agencies and programs and interagency coordination within the constraints of state and local bureaucratic structures, policies and regulations.

Another question sometimes asked about the external constraints on dissemination of supported employment:

- Is there a danger of labor market saturation in some communities? How is this (might this be) addressed? To what extent does supported employment affect other groups' access to entry-level jobs? Are there industries or job types with untapped potential?

The eight primary topics used to structure performance questions in this chapter appear in Part II of this report as a basic framework for presenting a set of core and supplementary performance measures which are suggested for implementation by states and individual projects on an ongoing basis. Additional topics are suggested for periodic or ad hoc research efforts by projects, states, or outside evaluators.

CHAPTER III NOTE

[1] This list bears a deliberate resemblance to the list of areas of consensus on program objectives described in Chapter I. In their evolution from objectives to performance questions to clusters of consensus data items, the following changes in title occurred: *worksite and community integration* was divided into *two* topics -- *worksite integration* and part of the topic *quality of life* -- and *program costs, environmental factors*, and *best practices* emerged as new categories. A clear trend also emerged, whereby those topics most readily lending themselves to quantified measurement increased in scope, and those topics difficult to measure in a consistent fashion began to shrink.

In the development of specific data items and measures to address these clusters of performance questions, the eight measurement domains underwent two additional title changes -- *compensated work* issues are addressed by measures of *employment outcomes*, and *meaningful work* issues addressed by a somewhat expanded set of concepts about *quality of employment*.

PART II:

ESTABLISHING CONSENSUS ABOUT RECOMMENDED DATA ITEMS AND DEVELOPING A DATA COLLECTION STRATEGY

IV. IDENTIFYING RECOMMENDED DATA ITEMS AND MEASURES

INTRODUCTION

While the first part of this report focused primarily on the conceptual framework within which the study evolved, the following section presents a practical framework for implementing common ongoing measures of supported employment efforts. These common measures fall within the eight measurement domains discussed previously:

- employment outcomes;
- quality of employment;
- opportunities for worksite integration;
- ongoing support;
- quality of life;
- participant characteristics;
- systems change; and
- supported employment costs.

Within each domain, the BPA study team used the wide range of information gathered, through the literature and discussions with informed respondents, to identify which data items and measures might best be considered as:

- core, or universal measures that provide information on an ongoing basis, including data necessary for ongoing program monitoring and for summarizing performance at state and federal levels. These are also measures that would be most useful if implemented across projects and/or states;
- supplementary, or additional measures that need not be the same across states and projects. These may include particular areas that a project would want to monitor for itself on an ongoing basis, as well as measures that reflect local and/or project model pecularities; and
- evaluation, or periodic measures or special studies that would be conducted for a representative sample,

occasionally, or only after the program has demonstrated longevity.

Using these criteria, the study team presented a potential set of core, supplementary, and evaluation measures to 35 individuals from around the country for discussion and consensus building during a day and a half seminar. These individuals represented federal agencies, state and local public and private agencies from the fields of developmental disabilities, vocational rehabilitation, and special education, as well as educational institutions and research centers. The National Consensus Seminar occurred on May 20-21, 1986 in Washington, DC, and was structured to (1) generate response to the potential measures; (2) create an opportunity for a diverse group of involved persons to explore the extent of theoretical agreement and consistency in practice on program goals, implementation practices, and measures of program accomplishment; (3) allow federal, state, and local representatives to exchange information to develop an understanding of the dimensions of supported employment as it emerges around the country; and (4) establish communication links between program operators, researchers, and policy makers. During the seminar, consensus-building focused largely on individual proposed data items rather than on the aggregate performance measures that might be constructed from them. The consensus-building process centered on those measures considered by the group to be core or universal.

This chapter reflects the group's work during this consensus-building process through tables displaying the set of core consensus measures and a set of supplementary or additional measures for each domain. In addition, each section attempts to briefly address:

- Why is this domain important to measure/what do we want to know?
- What are the constraints in measuring this domain? and
- What are the implications for collecting data in terms of the consistency and timing of data to be collected?

The lists of core consensus measures represent a set of data items and measures that would ideally be implemented by all supported employment programs in a consistant way. While these consensus measures do not mean to imply a federal intention to mandate standardized data collection, they do represent a minimal set of agreed-upon measures and a statement from those active in the field about what the supported employment program might hold itself accountable for and/or what describes the program's intent. In addition, areas were identified where further research will be needed to develop measures and methodologies.

The supplementary sets include measures that would entail choices made at project and/or state discretion about what particular information would be useful to collect. The specific measures included are suggestions or representations of ways to expand the core set of ongoing measures. Other measures which reflect project or community-specific concerns could certainly be added to the list of possibilities. Special studies or evaluation topics for each domain are addressed in Part III of this report, along with overall research issues in supported employment programs. Chapter V of this section discusses the various concerns which arise when attempting to develop a data collection strategy and implementation plan for ongoing performance monitoring.

EMPLOYMENT OUTCOMES

The key feature of supported employment that distinguishes it from day activity programs is **paid employment**. Employment exists when an individual's activities create goods and services that have economic value, and when he or she receives payment for work from an employer or customer. Therefore, the first step in measuring performance and perhaps the most important measure of success of supported employment programs is assessing the extent to which employment outcomes are achieved. These outcomes can be organized into four general dimensions: (1) actual placement/employment; (2) stability of that employment; (3) earnings; and (4) hours worked. These areas were identified as the key aspects of employment outcomes during the study, and are reflected in the core consensus data items and recommended measures listed in Figure 12A.

Figure 12A

EMPLOYMENT OUTCOMES

Core Consensus Data Items and Recommended Measures

Consensus Data Items	Recommended Core Measures
• Enrolled in SE program	• total # of participants served (active enrollees) during reporting period
• Obtained paid employment	• # and % of participants in paid employment (at any time during reporting period)
• Achieved SE outcome (current OSERS definition)	• # and % of participants who have achieved supported employment outcomes (current OSERS definition) • % of participants in paid employment who have achieved supported employment (current OSERS definition)
• Hourly wage at placement	• mean hourly wage at placement
• Hourly wage at end of reporting period	• mean hourly supported employment wage (mean wage for all participants who have achieved supported employment outcomes) • mean hourly wage for all participants in paid productive work (including participants who have not [yet] achieved supported employment outcomes) • mean monthly earnings for all participants in paid productive work (including participants who have not [yet] achieved supported employment outcomes) • % of employed participants/participants achieving supported employment earning minimum wage or above
• Received fringe benefits: health coverage -- yes -- no	• mean monthly supported employment earnings (mean monthly earnings for all participants who have achieved supported employment outcomes) • total earnings across all participants who have achieved supported employment outcomes for reporting period • total earnings across all participants (including those who have not yet achieved supported employment outcomes) for reporting period
• Total hours worked during reporting period	• mean hours worked per week in supported employment
• # weeks employed since enrollment, for participants with SE outcomes	• mean # weeks employed since enrollment for current participants with SE outcomes
• # weeks employed during reporting period, for participants with SE outcomes	• mean # weeks employed during reporting period for current participants with SE outcomes
• # weeks employed with present employer, for participants with SE outcomes	• mean length of time (# weeks) with present employer for participants with SE outcome

Measuring these dimensions will enable us to answer the questions: To what extent is the participant in supported employment involved in paid productive work, how paid and how productive is the work, and is that work retained over a period of time? In addition, this information will be an integral part of an internal assessment of project performance as well as providing bench marks against which to compare outcomes across projects. These comparisons will facilitate the identification of: (1) differences among supported employment projects; (2) differences between supported employment and other programs; (3) "best practices," or exemplary methods for achieving best outcomes; and (4) a long range picture of the supported employment program as it develops.

As evidenced in Figure 12A, the issue of defining who is a participant in supported employment is central to the consistent measurement of employment outcomes. The National Consensus effort resulted in a determination to collect data on all supported employment participants, defined as active enrollees, with certain measures designed specifically to capture outcomes for those who fall within or achieve the current OSERS supported employment guidelines (i.e., working at least 20 hours per week, in a group of eight or fewer disabled workers, and receiving publicly-supported, on-the-job support). Thus, the consensus items reflect a decision about questions of definition and priorities -- decisions which will be necessary to make on a broader scale to promote the greatest possible consistency in data collection. Other National Consensus decisions which are evident in the core data items are:

- an agreement to measure both **hourly wage** (to capture individual client level progress and changes in productivity) and total **monthly earnings** over the reporting period -- collected at the client level on a monthly basis and reported either monthly or quarterly on an aggregate level; and
- an agreement to collect both **total hours** and **number of weeks worked** during the reporting period for participants with SE outcomes (as defined by OSERS).

Measures of weeks worked for participants who have not (yet) achieved supported employment (as defined by OSERS) were determined to be supplementary (see Figure 12B). In addition, measures that looked at changes in earnings and employment status over time (by quarters) were also considered supplementary, as were measures of fringe benefits other than health coverage and more detailed information about hours worked per week. It is interesting to note the consensus reached about measuring hours and weeks worked in addition to earnings measures. Participation in work on a regular and sustained basis is valued as a goal in and of itself, independent of the wages and production yielded by that activity.

The potential for collecting consistent employment outcome data across states and projects seems high, given an effort to utilize common definitions. Projects and states must also consider implementation issues. Much of this information can be collected at the client level relatively easily, and then aggregated at the project and state level. It may be somewhat more difficult to collect client level data on fringe benefits, but measuring these at the employer level might not accurately represent whether or not participants actually receive fringe benefits. Ultimately, it is critical to look at all employment outcomes of supported employment in light of its goal for "normalized" employment. This will mean considering the data in the context of nondisabled coworkers and/or the standards of that particular industry.

QUALITY OF EMPLOYMENT

One of the goals of the supported employment initiative is to offer participants an opportunity to shift from the often monotonous tasks performed in sheltered employment to productive and meaningful work involving variety in tasks, the opportunity to acquire new skills, increased job satisfaction and security, and employment mobility. Some programs have goals that even go further than placing clients in "real" jobs in the community and have given priority to finding "non-traditional" placements for individuals with severe disabilities, as alternatives to what some consider to be stereotypical placements.

Figure 12B

EMPLOYMENT OUTCOMES

Additional or Supplementary Data Items and Other Possible Measures

Additional or Supplementary Data Items	Other Possible Measures
• Received fringe benefits: sick leave, vacation time, other -- yes -- no	• % of employed participants receiving: sick leave, vacation leave, other fringe benefits
• Value of fringe benefits as a percentage of earnings	• mean fringe benefit rate (value of fringe benefits as percentage of earnings)
• Mean hours worked per week during period employed	• # of supported employment participants working: -- 1-10 hours per week -- 11-20 hours per week -- 21-30 hours per week -- 31-40 hours per week
• Total hours spent in day program or work activity other than supported employment during reporting period	• % of total day program hours spent in supported employment
• # weeks employed since enrollment (for participants who have not [yet] achieved supported employment outcomes)	• mean # weeks employed since enrollment (for current participants who have not [yet] achieved SE outcomes)
• # weeks employed during reporting period (for participants who have not [yet] achieved SE outcomes)	• mean # weeks employed during reporting period (for participants who have not [yet] achieved SE outcomes
• # weeks employed with present employer (for participants who have not [yet] achieved SE outcomes)	• mean length of time (# weeks) with present employer (for participants who have not [yet] achieved SE outcomes)
• % weeks employed since first placement (for all participants)	• mean % weeks employed since placement (for all participants)
• Duration of program participation -- # quarters in program	• mean # quarters in program for current participants • mean # quarters in program for terminees
• Employment status at end of 2nd quarter, 4th quarter, 8th quarter, 12th quarter, etc., after enrollment (based on consensus data items)	• number and % of total program participants employed at end of 2nd, 4th, 12th quarter after enrollment (a participant is included in this measure if the reporting period is his or her 2nd, 4th, 8th, 12th quarter after enrollment)
• Earnings during 2nd, 4th, 8th, 12th quarter after enrollment (based on core data items)	• mean monthly earnings during 4th, 8th, or 12th quarter after enrollment (a participant is included in this measure if the reporting period is his or her 4th, 8th, or 12th quarter after enrollment)

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Thus, in order to measure the performance of supported employment efforts, the first step is to collect information about the nature of the work itself.

In addition to the employment outcome measures described previously, most of the existing measurement systems reviewed and analyzed by the BPA study team included some information about the nature and adequacy of the work placement. While this was often informal and descriptive in nature, a number of potentially useful examples of more formal procedures for collecting and reporting data about work placement characteristics exist. Much more work is needed, however, to develop measures that can address the full range of important questions about the quality of the employment situation including:

- What is the nature of the work -- is it an improvement over "make-work" in sheltered settings? Is it real work? Is it meaningful work? Is there a good match between the worker and the job tasks? Is stereotyping occurring?
- What is the quality of the work environment -- are appropriate job accommodations being made? What is the quality of the physical environment -- is there enough light and air? What is the quality of the interactions between workers and supervisors -- are there appropriate avenues for communication and exchange of information?
- Why do supported employment participants leave their jobs and where do they go after termination -- are supported workers leaving job situations for reasons similar to other workers? Where could improved supported employment program practices enhance job stability and retention? What are the external barriers that prevent supported workers from retaining employment? Where do participants go after termination from supported employment?
- How is supported employment interacting with the labor market -- what kinds of jobs are being accessed by supported workers? What kinds of labor markets developed on behalf of supported employment projects are being tapped successfully? Unsuccessfully? Is supported

employment filling existing jobs, creating new jobs, or both, and to what extent?

While not intended to comprise a comprehensive assessment of quality, several measurement areas describing basic employment characteristics were included by the National Consensus Seminar in the core measure set (see Figure 13A). These measurement areas include: **type of employer, type of job,** and **reason for termination** from the supported employment project, and were viewed by seminary participants as descriptive or proxy measures rather than measures of quality or program performance accountability. While the basic set of descriptive data gathered from these core measures will provide some of the information necessary to address the performance questions above, the current state of the art in defining and measuring quality of employment has certain gaps. For example, measuring the appropriateness of the job match is difficult. Current measures reviewed for this study are being used during the job placement process itself as a part of job task analyses and skill assessments during service delivery. However, these processes do not lend themselves to evaluating the ongoing quality of the match or the goodness-of-fit between the worker and the job over time. Further development of measures in this area are needed, so they can be included in a set of core measures. In addition, any measurement of the quality of the work environment itself requires the development of new measures.

Another factor integral to measuring quality of employment involves relating the particular supported employment jobs to the opportunities in the labor market. While a comprehensive picture of the types of jobs performed by supported workers would be useful on national, site and local levels for policy makers and project implementors alike, caution must be used in comparing the range of jobs developed by individual projects given the wide variation in local settings. These measures will also be useful descriptors in analyzing reasons for termination and participant destination status after program termination.

Figure 13B provides examples of expanded response categories for each of the categories of reasons for termination, which have been

Figure 13A

QUALITY OF EMPLOYMENT
(Employment Characteristics)
Core Consensus Data Items and Recommended Measures

Consensus Data Item	Recommended Core Measures
• Type of employer -- private nonprofit -- private for profit - small business or large corporation -- government - local, state or -- federal	• # and % of participants employed by different types of employers
• Type of job (develop standardized categories, referencing D.O.T., S.O.C. codes, etc.)	• # and % of participants in different types of jobs
• Who pays wages? -- SE program -- employer -- other	• # and % of participants receiving wages from each source
• Reason for termination by category (primary and secondary reason) -- employee performance reasons (involuntary departure) -- employer reasons other than employee performance (involuntary departure) -- employee reasons (voluntary departure) -- provider reasons -- other	• # and % of participants terminating for primary reason by category • # and % of participants terminating for secondary reason by category
• Participant destination/status after termination from supported employment program, for example: -- school -- wait list -- no service -- institution -- another SE program -- day activity program -- sheltered workshop -- independent competitive employment -- retired -- other -- unknown	• # and % of terminating participants leaving supported employment for each type of destination

Figure 13B

QUALITY OF EMPLOYMENT

Additional or Supplementary Data Items and Other Possible Measures

Additional or Supplementary Data Items	Other Possible Measures
• Type of industry (develop standardized categories, referencing D.O.T., S.O.C., etc.)	• # and % of participants employed by type of industry
• Reason for termination by specific types (more than one may be indicated) A. Employee performance reasons (involuntary departure), for example: -- attendance -- compliance -- emotional outbursts -- personal hygiene -- independence -- on task (off task) -- quality of work -- responding to instructions -- social skills -- speed -- task completion	• # and % of participants terminating for each type of employee reason (involuntary departure)
B. Employer reasons other than employee performance (involuntary departure), for example: -- change in job duties -- laid-off, facility closed -- laid-off, cutback in staff -- laid-off, seasonal -- replaced by another worker	• # and % of participants terminating for each type of employer reason (involuntary departure)
C. Employee reasons (voluntary departure), for example: -- quit, due to change in relationship status (e.g., married, divorced, etc.) -- quit, due to pregnancy and/or parenting responsibilities -- quit, for better job -- quit, didn't like job -- quit, health reasons -- leave of absence -- moved from area	• # and % of participants terminating for employee reasons (voluntary departure)
D. Provider reasons, examples to be developed	• # and % of participants departing for provider reasons
E. Other reasons, for example: -- quit, due to parental caregiver pressure -- quit, due to financial aid interference -- quit, due to transportation problems -- deceased -- other	• # and % of participants terminating for other reasons

grouped according to employer, employee, or provider reasons. As supplementary data, this measure permits recording more than one reason for job termination. For example, an employee's behavior which results in an involuntary termination may be the worker's only way of expressing dislike for the job. Thus, two explanations,and possibly more, exist for that termination. The more detailed response categories would permit recording all the reasons for termination that apply to each situation.

It would appear, then, that data on termination reasons may be collected at the client level, while other quality of employment measures may be appropriate to project level data collection and measures to demonstrate overall trends in job placement and movement within the context of local communities and projects. Research efforts needed to refine measures of job quality include not only studies of new approaches to measuring quality and job match, but also studies to add depth to the ongoing descriptive data, such as: (1) job mobility comparisons between those in supported employment and other workers; (2) studies of how supported employment projects are (or are not) accessing nontraditional jobs within the labor market; and (3) studies of how to use participant self-reports to define and describe the quality of employment and changes over time. The current core set of measures should be viewed as initial attempts to develop valid descriptive measures of the nature and adequacy of jobs. The importance of expanding current expertise in measuring employment quality will need to be reflected in future research efforts as the supported employment program evolves.

OPPORTUNITIES FOR WORKSITE INTEGRATION

The integration of individuals with severe disabilities into the workplace is a key element in the supported employment effort. Worksite integration focuses on providing opportunities for disabled and non-disabled co-workers to interact in a variety of settings and situations including the immediate work environment, lunchroom, break times, or during travel to and from work.

The results of this study have indicated the importance of going beyond measures that simply indicate whether individuals with severe disabilities are being placed into jobs where there are nondisabled co-workers present. A more complete definition of integration needs to include the existence and extent of meaningful contact between disabled and nondisabled coworkers. Evidence indicates that this type of interaction provides a teaching and reinforcement mechanism for social and work skill development. It is also an indicator of normalized working conditions and the opportunity to establish social relationships between people who have formerly been isolated from one another.

While integration at the worksite is the primary integration objective of supported employment programs, study results have also stressed the multidimensional mature of integration and the importance of integration outside of work. For many participants, success at work will be dependent in part on participation and success in integrated non-work environments. Persons with disabilities interact with non-disabled individuals when buying clothes to wear to work, when buying food, and while riding public transportation, as well as during participation in recreation/leisure activities. For many disabled individuals, community integration is not only an essential pre-requisite to successful integration at the worksite, but is also an outcome of successful participation in supported employment. (See also Quality of Life.)

Community integration is a concern that has been given a great deal of attention in recent years by administrators, service providers, researchers and policy makers in the fields of independent living, developmental services and special education. It is an area that is relatively new to vocational rehabilitation and employment policy. Perhaps because it is considered by many to be a secondary outcome in the context of employment programs, measuring community integration is not yet well-developed or well-defined in the field. Thus, few concrete examples exist of measures of the performance of supported employment programs in furthering community integration objectives. Further development would be needed to construct simple summary measures that could be included in the evaluation of supported employment impacts. It appears unlikely that community integration measures would be included in ongoing performance assessment, at least in the initial stages of program development. Thus, the proposed core measures **listed in** Figure 14A concentrates on opportunities for integration in the **worksite** only.

A major constraint in measuring integration is the question of how to define and collect information on the extent and nature of contacts between individual workers. Monitoring the proportion of persons with disabilities to nondisabled individuals is somewhat easier and the data are relatively easy to collect. However, study results indicate that developing indicators of the degree and kinds of interaction would result in measures that are more reflective of the accomplishment of integration objectives than measures of the numbers of nondisabled workers at the job site.

Some attempts have been made to develop client-level measures of integration which include features of both work setting and community interaction. While still in the initial stages of implementation and reliability testing, such attempts bode well for the development of such measures.

Until such developments occur, or until adaptations are made of existing integration measures from other related fields, current measurement of integration focuses on measures of proportion, proxy measures, and/or qualitative evaluation efforts. As Figure 14A indicates, the core consensus measures include basic quantitative measures of **the numbers of supported workers in the group support structure,** such as work crew or a work station, **and the presence or absence of nondisabled workers** (other than staff) in the immediate work setting. In addition, the seminar participants proposed an additional measure describing the **supervisory structure** utilized in the supported employment model which includes distinctions between mobile versus stationary and individual versus group structures. Each type of supervisory model has different implications for degree of opportunity for integration, such as increased opportunities in individual/stationary structures for contact and interaction between disabled and nondisabled workers. Thus a description of the structure would provide valuable insights about the possibilities for worksite integration. This is

Figure 14A

WORKSITE INTEGRATION

Core Consensus Data Items and Recommended Measures

Consensus Data Items	Recommended Core Measures
• Type of supervisory structure: -- mobile versus stationary -- individual versus group	• # and % of supported workers in each type of supervisory structure
• Presence of nondisabled workers (other than staff) in immediate work setting during work day: -- yes -- no	• % of employed participants who work in a setting with nondisabled workers present
• Number of supported workers in group support structure (group work station or work crew)	• % of program participants in group support structures of eight or less supported workers • % of program participants in group support structures of six or less supported workers • % of program participants in group support structures of four or less supported workers

true, also, in the case of measuring the number of supported workers in the group support structure -- another core consensus measure. All of those measures, however, were viewed by seminar participants as proxy measures until future research efforts can address these measurement issues further.

Another proxy measure was developed during the Consensus Seminar and was included as a supplementary measure (see Figure 14B). Tracking **whether contacts are required between the supported worker and supervisors, coworkers and customers** was viewed as one way to begin to study interactions, although this still does not answer the question of how to measure the extent and nature of those contacts.

Determining the proposed supplemental and core data items measuring integration raised a number of other issues or constraints. The questions were raised: Is integration a practice or an outcome? A guideline or a measure? A part of quality of life within and outside of the workplace? Although no conclusions were reached, the group was able to determine that the current sets of proxy integration measures would be most appropriately collected at the project level, as they are not meant to be measures of individual participant success or failure. However, as client level measures of social interaction begin to emerge as supported employment programs mature, further discussion is needed to develop a common understanding of the role of integration measures in measuring program performance.

ONGOING SUPPORT

The provision of ongoing support is the "mainstay" of the supported employment concept and that aspect which most distinguishes supported employment from other employment outcomes. The primary objective of ongoing support is to enable an individual with severe disabilities to sustain employment at a level that he or she would be otherwise unable to achieve.

The most common concept of support is the presence of a supported employment program staff person to provide on-the-job training and assistance. While concepts about the nature of these responsibilities

Figure 14B

WORKSITE INTEGRATION

Additional or Supplementary Data Items and Other Possible Measures

Additional or Supplementary Data Items	Other Possible Measures
• % of disabled workers in work setting -- total # of workers in work setting -- total # of workers with disabilities in work setting	• # and % of supported workers in work settings where less than 10% of the workers have disabilities • # and % of supported workers in work settings where 11-50% of the workers have disabilities • # and % of supported workers in work settings where more than 50% of the workers have disabilities
• During the course of the work day, is the supported worker required to interact with the following: -- supervisors, -- coworkers, -- customers?	• % of supported workers required to interact with: supervisors coworkers customers

vary, most models of supported employment include on-the-job support in three major areas: training, supervision, and behavior management. In addition to specific work-related support, the concept of supported employment may also include support that is indirectly related to the employment objectives such as transportation assistance, "peer support," and services to employers. Other types of support indirectly related to employment are those related to life activities outside of work such as assistance with independent living and social skills development. There is substantial difference of opinion about the role of supported employment programs in addressing needs outside of the workplace.

Diversity also exists in the intensity and duration of the support provided to participants. While the basic premise of ongoing support is that it is provided on a potentially permanent basis, some programs operate models in distinct phases in which on-the-job training is faded out over time and replaced with follow-along services that focus more on independent living, social skills, and general problem solving than on the work itself. In other programs, the structure of the job-related support is ongoing by its very nature, as in group work station or mobile crew models.

Although the concept of ongoing support is key to understanding how supported employment differs from other forms of employment, discussions about the implementation of performance measures related to ongoing support have been inconclusive. It was suggested that measures of ongoing support should be used as descriptive measures of different supported employment models, rather than as normative measures, since it is not the case that providing one level or type of support is better or worse than another. The ideal is to provide the necessary support to assist each participant to work as independently as possible, which will be a different mix for each participant and may vary for a given participant over time.

As described in Figure 15A, three data items were identified as core measures for the domain of ongoing support. These include:

- a description of the **types of support which the project generally provides** to its participants (e.g., assistance in transportation to and from work or self-care, training

Figure 15A

ONGOING SUPPORT

Core Consensus Data Items and Recommended Measures

Consensus Data Items	Recommended Core Measures
• Type of support provided: -- transportation -- self care -- job skills -- social interaction/behavior -- community living skills -- other • Whether support is provided: -- at the work place -- outside the work place -- both	• type of support provided by project during reporting period
• Type of support structure: -- individual setting -- group work station -- mobile crew -- small business run by or for employees with disabilities -- other	• # and % of participants in different types of support structures • approximate proportion of supported employment participants receiving each type of support during reporting period

in job skills, social interaction/behavior, or community living skills, or other support);

- **whether the project generally provides support at the work place, outside the work place, or both;** and
- a description of the **general framework within which support is provided** by the project (i.e., in an individual placement setting, in a group work station, in a mobile work crew, or in a small business run by or for employees with disabilities).

These data items can be used to develop project-level measures that describe the features of particular supported employment projects. Discussions with representatives of a variety of projects revealed that not all projects document variations in the types or amounts of support received by individual participants for use in a client-level measure. However, it would be useful in describing each supported employment project to know **the approximate proportion of participants who received each type of support** during a given reporting period, in addition to knowing whether the project has the ability to provide support of each kind.

Figure 15B describes several additional data items and measures that could be used to describe the delivery of ongoing support in more detail. These data items may be perceived as relevant to some supported employment models and not others, and may be available at some projects and not others. The data items include:

- **what funding source(s) are used to provide ongoing support;**
- **what organizations or individuals actually provide ongoing support** (e.g., supported employment staff versus employers or coworkers, versus another local service agency);
- **how many hours of support are provided each month,** in total, and by type of support; and
- **what the monthly cost of providing ongoing support is,** in total and by type of support.

Figure 15B

ONGOING SUPPORT

Additional or Supplementary Data Items and Other Possible Measures

Additional or Supplementary Data Items	Other Possible Measures
• Funding source(s) for publicly-funded ongoing support (i.e., agency and budget line)	• Funding sources utilized
• Provider(s) of publicly-funded ongoing support (i.e., supported employment staff versus compensation to employer, coworker, or local service agency)	• Providers utilized
• Total monthly hours of support per participant • Total monthly hours of support across all participants for each type of support • Total monthly costs of support per participant	• Mean hours of ongoing support per participant during reporting period -- by type of support -- in total
• Total monthly costs of support across all participants for each type of support • Total earnings by supported employment participants during the reporting period*	• Mean and distribution of ratio of cost of ongoing support to earnings generated per participant during reporting period

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*See Data Items under Employment Outcomes

These data items can be used to compute descriptive statistics including **the mean hours** and **dollars of ongoing support provided each month per participant.** By using data on mean monthly earnings (described under Employment Measures) an additional summary measure can be computed of **the mean monthly cost of providing ongoing support compared to the mean monthly earnings generated per participant during the reporting period.**

In summary, while the descriptions of ongoing support are not intended, by themselves, to provide an assessment of program success, they are critical for understanding variations in the service strategies and resulting costs of different models of supported employment. The institutional linkages and funding flows by which continuity of services/ongoing support is maintained over time is another key implementation issue with wide variation. A careful study of this aspect of supported employment may yield ideas about "best practices" that will prove valuable in replication efforts.

QUALITY OF LIFE

Improved quality of life for individuals with severe disabilities has consistently been raised as a desired outcome of supported employment. How improved quality of life is defined and measured varies from person to person, but in general the concept is viewed as increasing those activities which bring pleasure and self-worth to the severely disabled individual over his/her lifetime. The activity of work by its very nature has intrinsic values which can bring a sense of satisfaction and fulfillment, and can increase access to and privileges from society which are most commonly associated with work (i.e., making friends, sharing resources, and expanding social skills and environments).

Parallel to the personal intrinsic gains obtained by an individual with severe disabilities when he/she has the opportunity to work are the positive changes that can occur for the family or primary caregiver of the employee in supported employment. Reduced family stress, and freeing up time for family members are additional quality of life outcomes. Quality of life can also improve as a result of the expanded activities an individual can participate in or the additional items he/she can obtain because of his/her increased purchasing power and/or greater access to choices. In addition, improved quality of life can result from a combination of more self-confidence, self-direction and increased exposure to a greater array of options in the world.

It is only reasonable that quality of life issues focus on the individual and how the individual makes choices to obtain greater satisfaction. Yet, in the area of supported employment, the project and the overall system provide the structure which determines whether the individual with severe disabilities understands choice, has had practice making choices, and knows how to choose for the purpose of satisfying his/her needs. The concept of individual choices is considered to be an important aspect of quality of life.

Through discussions with respondents and reviews of the current available literature on measure development, the BPA study team identified the following aspects of quality of life as areas for potential measurement:

- **type of living arrangement** at program entry and over time;
- **use of mainstream transportation** at program entry and over time;
- **degree of community integration and participation;**
- **changes in Quality of Life Indicators, e.g.,** health status, self-direction and opportunity for choice, attitudes of family, participants and/or caregivers, self-esteem, skills levels, etc.; and
- **expendable income of participants,** at program entry and over time.

During the National Consensus Seminar participants indicated that the above areas did not adequately define the concept of quality, suggesting that these aspects actually described "lifestyle characteristics" rather than "quality of life." Some participants raised the issue that using the term "quality" implied a value judgment, whereas looking at changes in characteristics over time would not involve defining the standards for quality. Participant self-report was suggested as a way to capture this information without arbitrary values being placed on changes by non-participants. No specific data items, however, received group approval for inclusion in the core data set, although the domain itself was considered important to continue to pursue through research and special studies.

Several constraints emerge when considering the "how-to's" of measuring quality of life. At this point in time, a refined and reliable quality of life questionnaire and response index, which could be used across supported employment participants, family members and caregivers, does not exist. This kind of instrument would enable baseline client-level data to be collected at program entry and then compared over time with results from administering the same questionnaire at regular intervals. Some work is currently being done in this area, and there appears to be growing interest in further research efforts. There is a concern, however, that a standardized questionnaire may not be feasible, given differences in local communities and services. Limitations in what are considered "acceptable" evaluation methods, i.e., use of participant observation techniques or self report, may also curtail the development and use of innovative creative approaches to quality of life measurement, to the extent that policy makers and funding agencies may not consider them to be valid. For non-verbal participants, however, using alternative forms of self-report may be the most effective method.

The measurement of quality of life changes also involves the issue of whether defining or standardizing terms, such as *choice* and *autonomy*, is possible or even desirable. While most seminar participants agreed that these concepts were integral parts of quality of life, the question of definition and ultimately, of feasibility of measurement arose. When considering choice, there appear to be three major dimensions: (1) the *opportunity* for choice, i.e., whether an individual is living, working and playing in an environment where the possibility of self-direction exists; (2) the *extent* of choice, i.e., how *much* possibility for decision-making exists; and (3) the kind of choice, i.e., the range of areas available within which to make decisions.

While no consensus was reached on core measurers, as shown in Figure 16, several measures were included as supplemental proxies for changes in "lifestyle charactersitics." These include **type of living arrangement, use of mainstream transportation,** and a self-report measure of **degree of independence in living situation.** It was noted that measuring type of living arrangement should include lateral movement within the category as potentially more or less independent than the participant's previous situation. Measuring use of mainstream transportation would also be a supplementary measure used at project discretion, given that transportation and community mobility is locality specific. The self-report measure was added during the seminar to allow for participant definition of independence.

Assessing quality of life changes for persons with disabilities remains a critical issue for development and refinement of current measures. The intent of supported employment is to positively influence quality of life through meaningful paid work in integrated settings. Whether or not it ever becomes the responsibility of programs to track these influences remains to be seen, but as an avenue for encouraging the active self-assessment of the impact of supported employment on participants' lives, quality of life measurement represents an essential part of evaluation efforts.

PARTICIPANT CHARACTERISTICS

The target population for supported employment programs is that group of individuals traditionally excluded from vocational rehabilitation services due to the severity of their disabilities. Supported employment is designed as an alternative to day activity and habilitation programs. Most proponents of supported employment subscribe to the concept of the "zero reject model", which suggests that no individuals would be turned away from supported employment programs solely on the basis of limited abilities. This does not imply "total inclusion" or that all individuals must work. However, the "zero

Figure 16

QUALITY OF LIFE
(Lifestyle Characteristics)
Supplementary Data Items and Other Possible Measures

Supplementary Data Items	Other Possible Measures
• Type of living arrangement at program entry and over time, for example: -- with parents or relatives -- in group home or residential facility -- in semi-independent living situation -- in state hospital -- other	• # and % of participants in each type of living arrangement at the end of each reporting period • # and % of participants changing to more independent settings during reporting period (self-report)
• Self-report of degree of independence within living setting	• # and % of participants reporting increased independence within living situation
• Use of mainstream transportation at program entry and over time: -- does not utilize mainstream transportation -- utilizes mainstream transportation with assistance/prompts -- utilizes mainstream transportation independently	• # and % utilizing mainstream transportation with assistance • # and % utilizing mainstream transportation independently • # and % of participants increasing use of mainstream transportation during reporting period

reject" concept does imply that individuals will not be denied the opportunity to do productive work just because their capacity for work is less than the standards set for individuals without disabilities.

Because of the interest in using supported employment to reach out to individuals excluded from work opportunities in the past, and because the supported employment approach may be appropriate for a wide range of individuals with physical, mental, or emotional disabilities, it will be important for programs to collect data which capture the range of participant characteristics. Three major questions arise when assessing the performance of supported employment programs:

(1) Who is being served:

(2) Who is being successfully served?

(3) How do outcomes and service approaches vary for different types of participants?

In the past, the client characteristics recorded on supported employment intake/assessment records at the project level have usually included variables that are viewed as relevant by program operators in the development of a service plan to meet each individual's needs, as well as data that are readily available at the time a participant enters the program. Given the potential interest in using participant data (1) as an indication of whether appropriate individuals are being served, and (2)as an interpretive tool in assessing and comparing reported project out comes, a broader range of participant descriptors needs to be developed. The candidate measures can be divided into several categories:

- **demographic data** that are easy to measure and record (e.g., age, sex, ethnicity);
- **descriptors of the participant's disabling condition and functioning levels** (which are less easy to measure and categorize);
- the individual's **situation immediately prior to entering the supported employment project**; and
- **previous work history** and **previous service history.**

Participant Demographics

Supported employment programs are all currently collecting the basic demographic information on participants served. An issue which needs additional discussion in efforts to further a consistent reporting system is "who is considered a participant in supported employment" -- all individuals referred to the system, all individuals for whom an assessment is completed, all individuals who enter a training phase of services, or all individuals who are currently being compensated for work under the program? While variations in program models may make it impossible to arrive at complete standardization on this issue, more discussions are necessary to promote the greatest possible consistency.

Descriptions of Disabling Condition and Functioning Level

There are two distinct reasons for collecting data in this category. One reason is descriptive: to capture the variations in types of disabilities and functioning levels exhibited by project participants across projects and across states. Another reason is evaluative: to assess the "severity" or potential difficulty of the participants selected for services, both to monitor whether the group selected for services matches the stated program goals, and to assess the level of project outcomes, taking into account the characteristics of the clients served. For the second purpose, it may be useful to construct a "client difficulty index" based on the answers to the individual data items listed here. However, until projects finalize the types of disability categories and groupings they anticipate including in their participant population, it may be premature to suggest how to construct such a measure. In addition to referring to the variables describing disabling condition and functioning level, a client difficulty index would probably also be based on some of the variables in the last category -- previous work and service history.

Situation at Program Entry

The three variables that the study team clustered into this category included (1) **current living arrangements**, (2) **public assistance status at enrollment**, and (3) **service setting immediately prior to entry** into the supported employment program. These are each data items that should be relatively easy to collect, since they are based on participant status at a given point in time (i.e., project entry) rather than reconstructions of experience over a longer preprogram period. The description of living arrangement and public assistance status are important not only as descriptors to capture the range of variation in participants across projects and states, but are also important baseline measures for use in tracking individual changes brought about as a result of project participation.

Previous Work and Service History

The variables clustered in this category can be used in three different ways: (1) to identify participant characteristics that may influence the level of outcomes a participant is likely to achieve (i.e., capturing some aspects of client difficulty); (2) to record more complete descriptions of an individual's preprogram experience that can be compared to the same individual's experiences after entering supported employment in order to construct change measures (e.g., change in employment intensity, change in earnings, and change in work setting); and (3) to identify more completely what groups of people are being reached by the supported employment demonstration (and what groups are not being reached) in order to assess the extent of system transformation that is occurring.

According to the individuals involved in the national consensus process, those participant characteristics considered important for inclusion in the core data set (see Figure 17A) included measures from each of the four categories of demographics, disability information, situation at entry and prior setting. The core measures were generally felt to be descriptive in nature rather than measures to which programs should be held accountable, though consensus was not reached on this issue.

There was much discussion about participant characteristics and concern that they not be used inappropriately in conjunction with outcome data to target the program towards certain types of individuals. Historically, under a medical model, characteristics and especially

Figure 17A

PARTICIPANT CHARACTERISTICS

Core Consensus Data Items and Recommended Measures

Consensus Data Items	Recommended Core Measures
• Age (date of birth, with aggregate data reported in categories Under 18, 18-21, 22-30, 31-40, 41-64, 65+ older)	• mean age • % by age categories
• Sex	• % by sex
• Primary disability (by major category)	• # and % of participants with each primary disability type
• IQ	• mean IQ level
• Public assistance status at time of program entry -- SSI -- SSDI, etc.	• # and % of participants receiving public assistance by category
• Amount of cash grant (check state of art for feasibility and definition of what to include)	• mean monthly grant
• Service setting immediately prior to program entry, such as: -- special education - segregated -- special education - integrated -- adult ed/community college -- sheltered workshop -- work activity center -- day activity center -- institution -- other SE program -- no day program -- employed -- other	• % of participants from immediately prior service settings by category • % of participants from day activity programs
• # of participants ever in each prior setting (if research shows this has predictive value)	• # and % of participants ever in each prior service setting

functional assessments have three uses, descriptive, prescriptive, and predictive, with the predictive end considered to be of the "highest good." The goal of this information for the supported employment program, however, is not one of attempting to predict **success** (because the program is designed to succeed for those who would otherwise fail), but rather one of providing appropriate accommodations to individual needs and providing opportunity for choice. Thus, evaluation using participant data would look at **what** works for different individuals, not **whether** it works. It can also be used to predict costs.

The following data items were considered core by some seminar particpants and supplementary by others. These issues were not resolved in the large group consensus process and are included as supplementary items in Figure 17B:

- ethnicity;
- primary language;
- presence of disability by category (more than one may be indicated);
- severity of disability (other than mental retardation), with the suggestion of developing a summary score or index for severity of disability across all types of disabilities;
- living situation (at time of program entry); and
- communication skills.

SYSTEMS CHANGE

According to those who are active in supported employment efforts, project-level endeavors need to be accompanied by system-level procedural and policy changes to enable program and individual level outcomes to occur within a statewide framework of coordination, support, and cooperation. The ability of existing systems to facilitate the transition to supported employment from the current configuration of vocational, pre-vocational, and day activity service programs will depend on the ability to confront and redefine policies, procedures, funding streams, and program structures. Without these changes on all

Figure 17B

PARTICIPANT CHARACTERISTICS

Additional or Supplementary Data Items and Other Possible Measures

Additional or Supplementary Data Items	Other Possible Measures
• Ethnicity -- White -- Black -- Hispanic -- Asian -- Native american -- Other	• % by ethnicity categories
• Primary language	• % with English as a second language
• Presence of disability by category (more than one category may be indicated)	• # and % of participants with each disability type
• Detailed diagnosis	• % with secondary disability
• Expressive communication skills -- unclear speech -- clear speech -- vocalization only -- uses aids or sign language	• list and number by diagnosis
• Receptive communication skills -- understands gestures -- understands words and phrases -- understands conversations	• % by category of expressive communication skills
• Assessment of severity of mental retardation -- profound -- severe -- moderate -- mild -- not applicable	• % by category of receptive communications skills
• Assessment of severity of other types of disabilities (measures to be developed)	• % by category of severity of mental retardation • % by category of severity of other disability

system levels, supported employment may flounder and fail to develop a comprehensive resource allocation and coordination strategy.

There is some disagreement about whether system transformation is a secondary outcome that results from effectively addressing participants' supported employment needs, an interim set of procedural steps necessary to accomplish supported employment outcomes at more than a token level, or whether it is a primary objective in and of itself. Some program administrators, operators, and state policy makers have indicated that their primary concern is for participant outcomes, and that if these outcomes are pursued, systems change will occur to the extent that it is required. Others suggest that measurement of participant outcomes alone is insufficient for assessing performance, noting that it may be possible to achieve supported employment outcomes for a limited number of individuals without bringing about the broader structural changes. These changes in the service system would be needed to ensure the availability of supported employment opportunities to the larger population that could benefit from access to these opportunities.

If a performance measurement system is to include an assessment of the extent to which system transformation has actually occurred, then system change measures need to be developed and implemented. A review of existing measurement systems reveals little in the way of existing measures of system change currently in use, presumably because most of the supported employment activity occurring to date has been in the form of specific projects rather than as a system transformation activity. However, a review of existing literature and programs has been helpful in identifying the areas in which measurement is needed.

These measurement areas include (1) **the extent of local systems changes**, such as changes in local case management and referral mechanisms; (2) **the influence of the supported employment initiative on the state service delivery system**, including achievement of state objectives, and changes in service delivery mechanisms; (3) **the volume of supported employment outcomes**; and (4) **the funding flows or amounts of funding by source** and the relations between the funding flow and the participant flow into supported employment.

Those systems change outcomes considered important to include in the core data set included the more concrete measures such as the proportion of individuals being served and the flow of funding by different agencies. The systems change measures included are constructed using data items from other clusters, as well as using an additional data item asking for amount of supported employment funding by source (see Figure 18A).

Rather than focusing on individual core data items for this domain, the participants in the National Consensus Seminar chose emphasized summary performance measures of systems change. It was noted that when considering systems change, one must answer the question: What are we trying to change? The suggested answers to this question included:

(1) increasing opportunities for individuals with severe disabilities;

(2) reducing the numbers of individuals in day activity programs; and

(3) shifting funding patterns from traditional day programs into supported employment.

Thus, the three measures in the core set provide the mechanisms for assessing the extent to which these changes have occurred.

Measures of achievement of state objectives, shifts in local service delivery systems and data items requiring information data from outside of the supported employment system (e.g., number of participants in day activity programs) were included in the supplementary set of measures (Figure 18B). These supplementary measures, then, include measures and data items that are particular to states and local communities, requiring development and collection at state and/or local discretion. Constructing measures using data collected from outside of the supported employment system would require coordination between different agencies for some states -- a measure of interagency cooperation itself.

System change measures reflect the information that a state or local system will choose to collect for monitoring its own transfor-

Figure 18A

SYSTEMS CHANGE

Core Consensus Data Items and Recommended Measures

Consensus Data Items	Recommended Core Measures
[The first two recommended core measures use data items from the Employment Outcomes section, in conjunction with data from outside of the supported employment system on number of total participants in other programs and waiting lists]	• Volume of supported employment outcomes over time • Proportion of eligible target population being served • Ratio of supported employment participants to total publicly-funded day program participants (including day activity, work activity, and sheltered workshop programs)
• Amount of funding for supported employment programming by source	• Amount and proportion of funding for supported employment programming by different funding sources over time

Figure 18B

SYSTEMS CHANGE

Additional or Supplementary Data Items and Other Possible Measures

Additional or Supplementary Data Items	Other Possible Measures
• State objectives for systems change	• Evidence of state objectives of systems change in legislation, regulation, agency roles and relationships, funding mechanisms, etc.
• Achievement of state objectives of systems change	• Evidence of achievement of systems change objectives
• Changes in local service delivery system, e.g., -- referral structures -- interagency cooperation -- centralized coordination responsibility -- funding sources for ongoing support -- involvement of parents, consumers, and caregivers -- case management procedures	• Evidence of change over time in each of the components of the local service delivery systems
• Changes in state service delivery mechanisms such as: -- case management procedures -- rate setting structures -- ability to provide ongoing funding -- referral mechanisms -- documentation and monitoring -- interagency coordination mechanisms	• Evidence of change over time in each of the components of the state service delivery system
• # of participants in supported employment (uses data from client characteristics) • # of participants in day activity programs, work activity programs, and sheltered workshop progams (uses data from outside of the SE system)	• Ratio of supported employment participants to participants in each of the following programs (who have not achieved supported employment): -- day activity -- work activity — sheltered workshops • Changes in above ratios over time
• Immediately prior setting (see participant characteristics data)	• Changes in proportion of participants from different immediately prior settings over time
• Amount of system funding for each component of supported employment (e.g., ongoing support, administration, staff training) by source	• Proportion of funding for each component of supported employment which is paid for by the different funding sources over time

mation. These data would likely be collected annually and would provide both a statistical and descriptive record of what has occurred since the program's inception. This information will become increasingly valuable as the program's longevity increases. Not only will system change measures document the system's commitment to and follow-through on long-term plans for increasing opportunities for persons with severe disabilities, these measures will also prove useful for looking across states at a national picture of the program's accomplishments.

SUPPORTED EMPLOYMENT COSTS

The implementation of any new program or service approach raises questions about how much the program costs and how its costs compare to those of other programs. This is especially a concern when, as in the case of the supported employment initiative, the goal is one of system transformation, not merely one of starting new programs. Thus, observers not only want to know how much the program costs, and how these costs compare to other programs, but also want to explore the relationship between the costs and the outcomes achieved through the program.

Program costs are a critical data element in order to (1) compute cost effectiveness measures for the delivery of supported employment services; (2) track how the public investment in supported employment programming is changing over time; and (3) assess how the public and societal financial investment in supported employment compares to the taxpayer financial benefits generated by the program.

Attention to the performance of supported employment on cost measures implies a series of comparisons. One such comparison is between supported employment and other day programs, to address questions such as the following:

- How do supported employment costs per participant compare to the costs of alternative day programs, such as day activity centers, work activity centers, and sheltered workshops?

- How do the financial returns of supported employment (tax revenues and reduced transfer payments from the taxpayer's perspective, and increased disposable income from the participant's perspective) compare to the financial returns generated by public investment in alternate day programs?
- Do the cost savings generated justify the public outlay for these programs?

A second set of comparisons is among different supported employment projects, and particularly across different models of service delivery (e.g., across projects that utilize individualized job settings versus mobile work crew models versus enclaves within industry) to answer questions such as the following:

- How do the costs of supported employment vary from project to project?
- Do cost-effectiveness or benefit-cost measurers vary according to the model of supported employment that is being used?

It is important to note here the need for caution in conducting comparisons such as these. Care will need to be taken to ensure that program context is taken into account as well as the characteristics of program participants. There are many variables that can influence costs besides the operation of the programs themselves.

In negotiating consensus about the cost data items that should be considered core or universal data elements, several constraints were identified. First, not all supported employment projects monitor costs in a way that would permit them to identify the actual costs associated with serving a given individual. (Group-oriented models, for example, are less likely than individual placement models to keep track of the specific levels of support provided to individual participants). Thus, the recommended core measures focus on collecting aggregate project data on program costs and computing mean costs per participant, rather than on recording costs for each participant. Second, a number of projects would find it difficult or impossible to distinguish the costs associated with different program activities (e.g., ongoing support versus supervision, since in many projects these activities are closely intertwined or conceptually merged). Thus, the recommended core data items ask only for total program expenditures.

Figure 19A summarizes the data items that are recommended for universal data collection, and the recommended performance measures that are based on these data items. The core data elements document **supported employment funding sources** and **expenditure levels for a given reporting period** (such as an annual period), and document any restrictions on the services, participants or time frames imposed by the funding sources. **Public funding** as well as **privately-generated revenue** are included.

The recommended performance measures based on these data items summarize **total project expenditures from public and other revenues**, and compute **mean total annual cost per enrollee**, **mean annual public cost per enrollee**, and the **mean public cost of supporting one participant in supported employment for one month.** A final recommended performance measure utilizes aggregate statistics on mean monthly participant earnings (described under Employment Measures) to compute the **mean public cost per dollar of participant earnings.**

Figure 19B summarizes a series of supplementary cost analyses that are needed to answer performance questions about the costs, benefits, and relative cost effectiveness of supported employment compared to other programs. Each of the items listed in Figure 19B really represents an extended set of data elements and a series of computations.

The first supplementary analysis involves **comparing the total costs and mean monthly costs computed for supported employment projects to data on the costs associated with other day programs.** For the purposes of comparison with other programs, the full costs of supported employment also include the cost of participation in other day services as an adjunct to supported employment. In addition to comparing total program costs, it will also be important to do comparisons using standardized units such as "cost per participant hour" and "cost per

Figure 19A

SUPPORTED EMPLOYMENT COSTS

Core Consensus Data Items and Recommended Measures

Core Consensus Data Items	Recommended Measures
Amount of Public Funding by Source	
• Funding agency • Total amount by funding source • Constraints by funding source -- Funding constraints about time frame(s) -- Funding constraints about service -- Funding constraints about eligible or target populations	• # and type of public funding sources • Amount of public funds from each source • Total public expenditures during reporting period • % of public funds from each source
Amount of Other Funding by Source	
• Nonpublic sources of funding -- Foundation grants -- Community fundraising — User fees -- Revenue generated by sale of products • Total amount by funding source • Constraints by funding source -- Funding constraints about time frame(s) -- Funding constraints about services -- Funding constraints about eligible or target populations	• # and type of other revenue sources • Amount of funds from each source • Total expenditures of other-than-public funds during reporting period • % of other revenues from each source
Total Program Costs	
• Total public costs for supported employment during (annual) reporting periods	• Total expenditures (public and other) • % of total expenditures that are public • Mean total cost per enrollee • Mean public cost per enrollee • Mean public cost per person month of supported employment • Mean public cost per dollar of participant earnings during reporting period
Total Public and Private Costs During (Annual) Reporting Period	
(For revenue producing projects and projects with nonpublic sources of support for total expenditures including revenue generated by project or other non-public funds) • Total enrollees served during reporting period* • Total individual person-months of supported employment accumulated during the reporting period* • Total earnings by supported employment participants during the reporting period	

*See Data Items under Employment Outcomes

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Figure 19B

SUPPORTED EMPLOYMENT COSTS

Additional or Supplementary Data Items and Other Possible Measures

Additional or Supplementary Data Items	Other Possible Measures
Relative Costs of Alternative, Adjunct or Complementary Programs Utilized by Supported Employment Participants • Total monthly cost of other programs during reporting period • Total monthly cost per enrollee in paid work through other programs • Total monthly cost per participant dollar earned through other programs • Cost of participation in day services as an adjunct to supported employment	• Generation of summary cost data; comparison of cost measures (see recommended measures) between supported employment and other day programs such as sheltered work activity programs, day activity programs
Taxpayer Impacts: Computation of Taxpayer Benefit Costs for Supported Employment Programs • Mean monthly transfer payments • Mean monthly public cost of social services (including cost of day programs) • Mean value of tax revenues generated	• Generation of summary cost data; comparison of taxpayer costs and benefits between supported employment and other programs controlling for participant characteristics and other factors
Societal Impacts: Computation of Societal Benefit-Cost for Supported Employment Programs • Mean value of participants' contribution to the social product (estimated using earnings) • Noneconomic benefits such as changes in quality of life experienced by participants and other family members • Mean monthly total cost of social services received by participants	• Generation of summary cost data; comparison of societal costs and benefits between supported employment and other programs controlling for participant characteristics and other factors
Participant Impacts: Computation of Participant Benefit Costs for Supported Employment • Mean monthly earnings, net witheld taxes • Mean reimbursed work expenses • Mean monthly transfer payments	• Generation of summary cost data; comparison of mean participant expendable income between supported employment and other programs controlling for participant characteristics and other factors
Employer Impacts: Costs and Benefits of Employing Supported Versus-Non-Supported Workers • Provision of training and supervision • Job accommodation costs • Productivity levels • Absenteeism • Job turnover rates • Wages paid • Fringe benefits provided	• Generation of summary cost data; mean net costs (benefits) of employing supported workers (in comparison to labor industry standards or co-workers in similar jobs)
Costs by Type of Project Activity • Cost or percentage of total budget allocated to general administration, outreach, job development, etc.	• Percentage of budget allocated to each type of activity over time

participant dollar earned." The generation of data on costs of other programs would have to be undertaken at the state level or local system level, since these data are not available to local supported employment projects.

The second supplementary analysis involves **comparing the financial costs and benefits of supported employment from the perspective of the taxpayer.** To generate these measures, it will be necessary to collect data on:

- supported employment program costs; and
- other changes in public costs resulting from participation in supported employment, such as:
  - -- changes in transfer payments received by participants
  - -- changes in participant utilization of other publicly-funded community services
  - -- savings from increased tax revenues paid by participants.

It is likely that collection of these data, even for a limited research sample, will be beyond the capacity of most supported employment projects, unless special research funding and research staff are made available. In order to compare the taxpayer benefits and costs from supported employment to the other day programs, similar data on costs and benefits would have to be generated for these other programs as well.

The third supplementary analysis, involves **comparing the costs and benefits of supported employment fromthe perspective of society as a whole.** To generate these measures it will be necessary to collect data on:

- total costs of supported employment and other social services to participants including non-governmental costs; and
- the value of participants' production or contribution to the productivity of society as a whole -- i.e. net contribution to the social product.

This analysis also provides the specific vehicle for addressing the non-economic benefits of the program such as increased community integration and participation and improved quality of life for participants and their families.

The fourth supplementary analysis involves **comparing the financial costs and benefits of supported employment from the perspective of the program participant.** In computing these measures, it will be necessary to collect data on:

- unreimbursed participant expenses associated with participating in supported employment;
- increases in participant take-home earnings;
- changes in earnings of other household and family members due to reduced need for participant care;
- changes in transfer payments or other financial support received by participants; and
- estimated value of any changes in life quality experienced by participants.

Like the previous taxpayer benefit/cost measures, the collection of data for the participant benefit/cost measures is likely to be beyond the capacity of individual supported employment projects, even for a limited study sample, except as part of a specially-funded research effort.

The fifth supplementary analysis listed on Figure 21B is the collection of data on the **benefits and costs to employers hiring supported employees.** Once again, a variety of data would have to be collected for a sample of participating employers, including:

- additional training and supervision costs;
- other job accommodation costs;
- costs or cost savings from supported worker productivity compared to other workers;
- costs or cost savings from supported worker absenteeism/job turnover rates compared to other workers; and
- costs or cost savings from supported worker wages and fringe benefit-costs compared to other workers.

These data are not likely to be part of the ongoing data collection efforts of a supported employment project. A special research study at the state or federal level could be used to generate data on these measures.

The final supplementary analysis which may be of particular interest to some projects or some project models is an analysis of **how total project costs are allocated to various activities,** such as general administration, outreach, job development, direct participant supervision and/or training, and indirect case management services. The measures based on these data would be used to compare the percentage of the project budget allocated to different activities, as well as shifts in these percentages from one reporting period to another, or from one project to another.

V. DEVELOPING A DATA COLLECTION STRATEGY AND IMPLEMENTATION PLAN

CONSISTENCY VERSUS VARIATION

By suggesting common data elements and measures that may be used across different supported employment projects and/or states, the set of core consensus measures represents an attempt to define common approaches to measurement rather than mandatory or standardized information systems. Variation or flexibility in data collection practices across projects and across states will be expected due to: 1) variations in project models, 2) how long the projects have been in existence, 3) particular local or state characteristics, and 4)the priority given to different objectives. For example, on a local level, the data collection and monitoring system for a new free-standing project which uses group work stations in an urban industrial area with accessible public transportation and a priority on serving individuals from day activity centers may look somewhat different from an information system for a project using an individual placement model based in an existing service organization located in a rural area.

On a state level, data systems will also vary based on whether an existing information system is expanded to include supported employment variables or whether an entirely new system is developed. The utilization of an existing system may provide a state with a broader base of participants, but may be more limited in the types of data able to be collected, and the timing of that collection. Definitional problems may also arise when expanding an existing state system, given any changes from historically accepted to current terminology. Other states may choose to design and implement an entirely new data system especially for supported employment programs. While this may enable those states to develop a unique system reflecting the timing, definitions and participants involved particularly with supported employment, a separate system may be limited by its specific supported employment focus rather than on providing more global information about the entire potential target population. Thus, a range of both local and state level data systems have and will continue to emerge along with the development and refinement of supported employment programs.

However, there does appear to be keen interest in potential for promoting consistency in data collection where possible, through the defining and implementation of a set of broadly applicable measures such as the ones presented in Chapter IV. These may be useful to projects for internal uses, including the refinement of service practices and the self-monitoring of project development. Additional potential uses of standardized data include accountability to funding agencies and "cross-fertilization" through sharing of information between programs which are collecting data using the same data elements. The suggested core data set also represents a framework for state systems to consider in designing monitoring systems for grantees, in order to include data on outcomes the states want to encourage as well as to include measures they want all projects to be held accountable for. On a national level, these measures represent the building blocks for federally initiated evaluation or research about supported employment, and provide a framework for designing such an effort which addresses the necessity for basic uniformity in definitions, data elements, and documentation procedures.

Whether or not a large-scale federal overview of supported employment efforts ever occurs, this study's findings are an encouragement for states and projects to determine the important questions to be asked about the effectiveness of supported employment efforts and the best ways to answer key performance questions. The core or minimum set of measures described in this report are measures that are intended to be used flexibly by states, with respect to individual service providers. Some states may only be able to look toward implementation for programs receiving specific supported employment funding. Others will be able to collect information from all programs offering supported employment alternatives regardless of funding source. However states choose to implement a system of program monitoring and evaluation, it will be critical to carefully document: (1) the range of participants served; (2) the accomplishments of the program; (3) the best practices; and (4) systems changes with an eye toward generating a rich data base of common information on a cross-project scale as well as the unique aspects of particular programs.

OVERVIEW OF IMPLEMENTATION OPTIONS

Who Collects the Data and Who Maintains a Client-level Data Base?

With the exception of systems change and costs measures, the core and supplemental data items and measures described in the previous chapter are generally stated in the form of client-level data elements. However, state or national level core consensus measures could be constructed from project-level summary reporting measures, rather than necessarily requiring the maintenance of a client-level data base at the state or national level.

There are two basic alternatives for collecting client level data -- either at the project level or at the state level. In either case, it is the service provider maintaining the participant files who will have ultimate responsibility for initially extracting and recording these data. Thus, there are two basic options:

- The data from the individual client files are reproduced and simply passed on to the state for aggregations; or
- Projects maintain the only set of participant-level records due to concerns about:
  - participant confidentiality,
  - familiarity with the information, consistency of the data, and/or
  - choice of state to not collect or require reporting of client-level data?

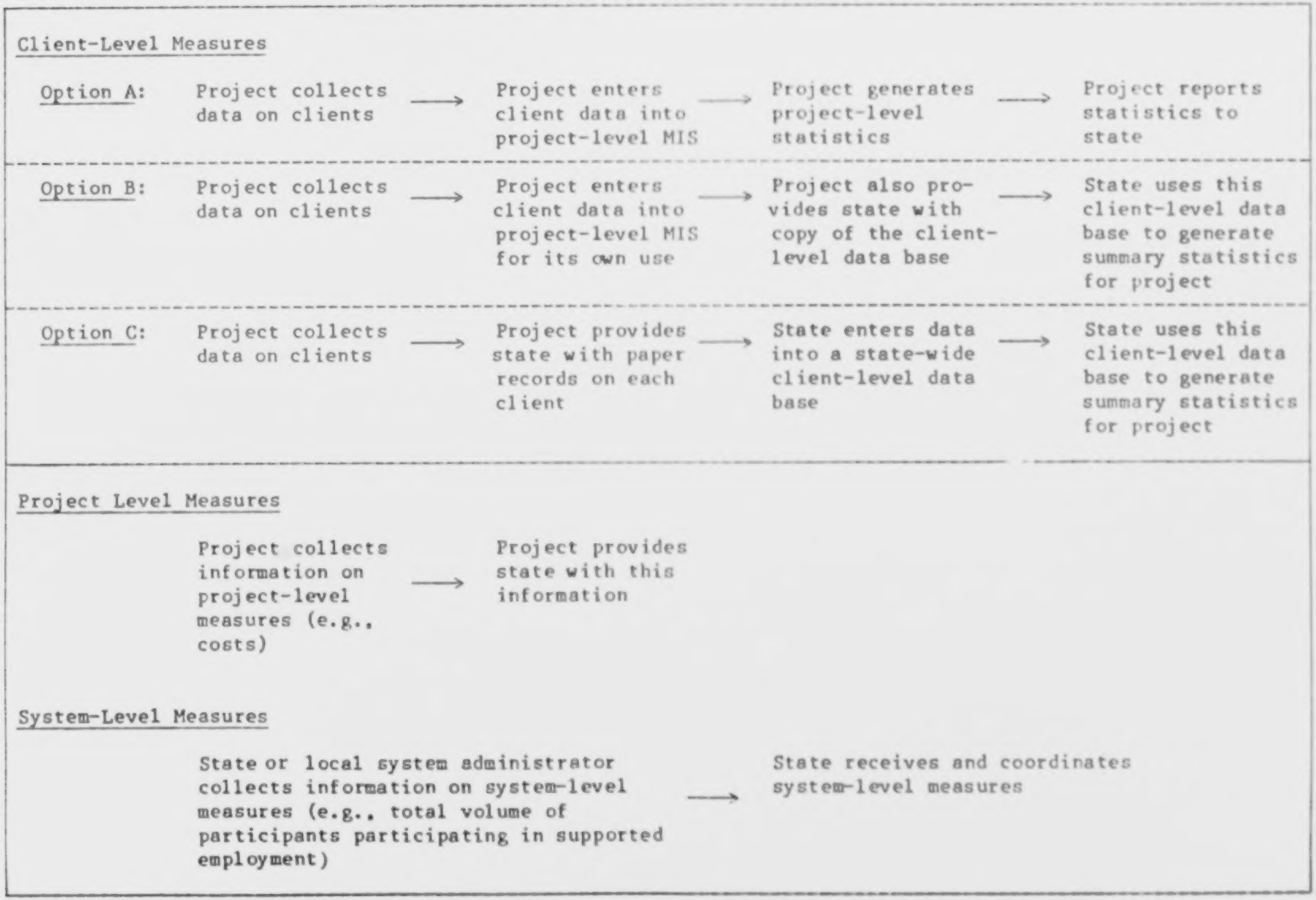
In this last instance, projects would prepare aggregate statistics for submission to state-level monitors/evaluators.

Who Aggregates the Data and Generates Summary Reporting Measures?

Figure 20 illustrates options for collecting and reporting data describing the project, state and national perspectives on supported employment accomplishments. As mentioned previously, a client-level

Figure 20

Data Collection and Reporting Options



Client-Level Measures

Option A: Project collects data on clients → Project enters client data into project-level MIS → Project generates project-level statistics → Project reports statistics to state

Option B: Project collects data on clients → Project enters client data into project-level MIS for its own use → Project also provides state with copy of the client-level data base → State uses this client-level data base to generate summary statistics for project

Option C: Project collects data on clients → Project provides state with paper records on each client → State enters data into a state-wide client-level data base → State uses this client-level data base to generate summary statistics for project

Project Level Measures

Project collects information on project-level measures (e.g., costs) → Project provides state with this information

System-Level Measures

State or local system administrator collects information on system-level measures (e.g., total volume of participants participating in supported employment) → State receives and coordinates system-level measures data base can be maintained at either the state or the project levels. Which way this occurs and how often the data are summarized depends upon state and local project negotiations and intended uses of the data. It may be more meaningful for the projects' internal use if the summary statistics are prepared and reviewed by project staff before the data are passed on to the state. If aggregation and preparation of summary performance measures occurs at the state level, however, states can be assured of consistency and quality control across projects and can also somewhat relieve the burden of data management at the project level. Again, who does what and at what level needs to be negotiated among the involved actors. System level measures, as shown in Figure 20, will need to be generated and analyzed at the state or federal level.

Timing Issues

The timing of data collection and reporting activities is another important aspect to consider. It seems likely that most projects would prepare quarterly reports of the collected information. The timing of the preparation of data summaries would vary somewhat, depending on the nature of existing information systems and whether client-level or project-level data are being used. Thus, reporting measures may be collected on an ongoing or monthly basis even though they are likely to be reported only quarterly, or, in the case of cost and system change measures, annually.

Some measures may be collected at program entry (for baseline data) for each participant and again when changes occur in participant status. Collection of data as changes occur would require an ability to manage data collection in terms of client time. That is, the ability to trigger a data collection activity at any time during the reporting period. In some projects, rather than initiating data entries when changes occur, information on current client status may be collected at the end of each reporting period.

Who Analyzes the Data?

All involved actors in supported employment program efforts will be interested in analyzing the data, or portions of the data, for different purposes. Beyond information for internal monitoring and external accountability, projects will find the data useful for disseminating state-of-the-art information to service providers across projects and across different states through conferences, publications, and direct sharing of experiences.

States will analyze information to:

- look at accountability issues;
- develop funding criteria;
- identify barriers and disincentives for employment;
- develop and refine policies; and
- design and fund training and technical assistance activities.

On a periodic or voluntary basis, national or cross-state analyses would provide information on variation and commonalities among projects and states, as well as overall changes in the service delivery system. Nationally, some combination of data from other sources, such as labor market characteristics, would also be useful as a part of this national effort. Finally, at all levels of aggregation, consumers, parents, and caregivers will be looking toward this information to assist in informed decision-making about services, increased options, and improved quality of life for participants.

PERSPECTIVES ON PROJECT AND STATE ACCOUNTABILITY

During the initial stages of implementing a supported employment data collection system, most projects will be in the start-up phases of project implementation. Even the experienced projects will still be adjusting to the new mechanics of defining performance data items, and collecting and summarizing data on project performance measures. Under these circumstances, it is recommended that the initial outcome data generated by a supported employment information system be used as descriptive information about program experience, and as broad indications of whether state projects and the national program initiative are moving in the desired directions, but not as measures of the relative effectiveness of different projects or program models.

Ultimately, after the initial start-up phase of data collection is completed, performance measures can become useful for assessing individual project accomplishments as well as national performance. The potential assessment-related uses of the proposed data items and performance measures include (1) ongoing self-assessment by projects themselves; (2) ongoing monitoring of project performance by an external funding agency or administrative agency; and (3) summary measures of system change and system effectiveness.

Performance assessment efforts for supported employment will be most effective in furthering program objectives if all relevant actors agree on which measures should be used to demonstrate program accomplishments, as well as on the relative priority among different measures of performance. If this level of consensus can be achieved and maintained, then any performance assessment exercise will be viewed as a way to further agreed-upon program goals.

Performance assessment becomes dangerous only when the performance measures are viewed merely as an externally imposed monitoring tool that can be used to reward or sanction projects based on how well they perform. The danger in such a situation is that a supported employment project might decide to "play it safe," i.e., enroll only participants who they know will succeed in supported employment jobs. This would be counter to the program goals since the whole concept of supported employment is to take a chance on serving individuals who have already been rejected as bad risks by all previous employment service providers. If accepted as reflecting consensus about program objectives, it is hoped that performance measures can have the opposite effect -- that of encouraging projects to enroll individuals who have not previously had the opportunity to work, and of disseminating information about how to enable such individuals to succeed in supported employment.

PART III:

REFINING AND USING THE PERFORMANCE MEASURES

VI. USING THE PERFORMANCE MEASURES TO ANALYZE PROGRAM EFFECTIVENESS

In this chapter, we briefly outline the types of series of qualitative and quantitative analyses that can be conducted using the core and supplementary performance measures described in the previous chapters. Each of these analyses is likely to be conducted at various scales of operation and levels of aggregation, depending on the variations in the questions asked, the resources available for data collection and analysis, and the organizational priorities of those funding the research efforts. In this chapter, we describe two distinct uses of performance measurement: (1) to conduct ongoing analyses to inform program management decisions, and (2) to carry out research efforts to guide policy and program development.

The basic building block required for most of these analyses will be the collection and recording of basic client-level data by supported employment projects around the country on (1) the participants, (2) the services provided, and (3) the outcomes experienced by supported employment clients. Additionally, project-level data on program costs and service models will be critical to most analysis efforts. Thus, it is our hope that the collection of a core set of client-level data on an ongoing basis will come to be viewed as a part of the normal cost of "doing business" as a supported employment service provider. However, because collection does have clear costs associated with it, the data designated as "core data" clearly have to be keep to a minimum.

The purposes of BPA's study have been two-fold: (1) to facilitate discussion and encourage the development of consensus about the most important core data items and performance measures which, it is hoped, will come to be considered the bare minimum for data collection and reporting for the National Supported Employment initiative as a whole and for its constituent state and local projects, and (2) to establish a conceptual framework for the collection and analysis of additional data to address supplementary performance questions of interest to a wide audience. Some of these additional or "supplementary" data elements may be feasible and appropriate for data collection by some or most projects on an ongoing basis for all supported employment participants. Others may be feasible or appropriate for data collection by some projects on a periodic basis (e.g., one month out of every twelve) or for a random sample of all participants (i.e., a special study sample). The collection of still other data elements is clearly beyond the resources and/or capacity of local projects, and would require special research funding and/or special data collection efforts.

The remainder of this chapter presents a conceptual overview of the various analyses of supported employment data that would address ongoing program management concerns and support policy and program development efforts. Later chapters describe an effort to arrive at consensus about research priorities for supported employment in the immediate future. These research priorities consist of topics which require special study efforts and about which a variety of audiences have expressed interest.

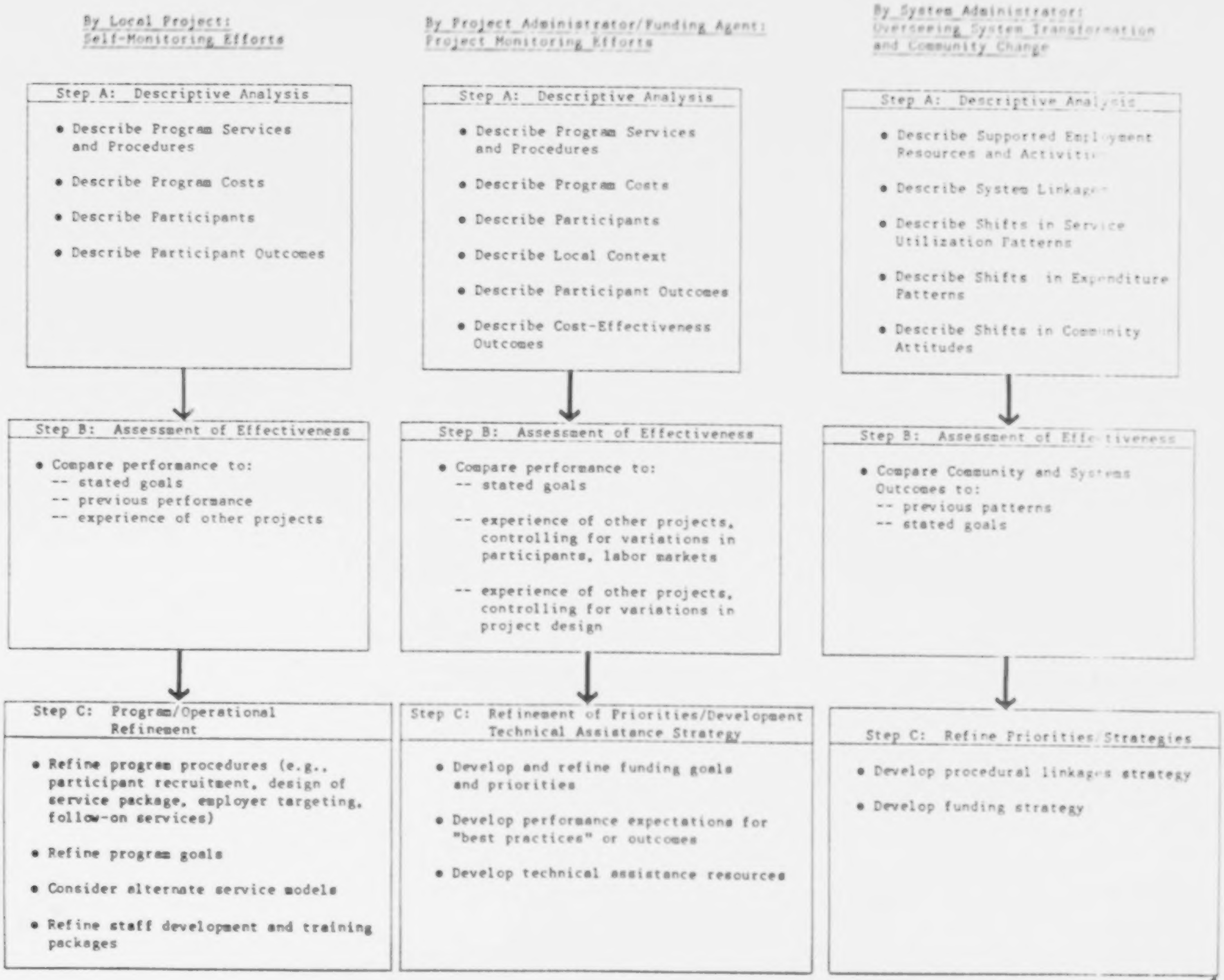
DATA ANALYSES TO INFORM PROGRAM MANAGEMENT DECISIONS

Figure 21 summarizes the different analyses that could be conducted to inform program management decisions by supported employment operators and administrators. These management-related analyses of program effectiveness have several features in common: (1) they are based on directly observable measures of immediate program outcomes; (2) they are based on data collected and reported by projects themselves on a regular basis; (3) they compare the observed performance to a formal or informal performance standard based on previous experience or some a priori expectation or goal; and (4) they are intended to identify flaws or weaknesses in performance in a timely fashion, in order to stimulate creative thinking about program refinement or modification.

At the local project level, analysis of this type is oriented towards "self-monitoring" and self-corrective actions. As described in Figure 21, the first step in project self-monitoring is describing the various features of the program including the services provided, the cost of those services, the number and characteristics of the participants served, and the current service outcomes for each participant served. During a second step, the observed data are compared to formal

F: 21

Analyses to Inform Management Decisions



By Local Project: Self-Monitoring Efforts

Step A: Descriptive Analysis

- Describe Program Services and Procedures
- Describe Program Costs
- Describe Participants
- Describe Participant Outcomes

Step B: Assessment of Effectiveness

- Compare performance to:
  - -- stated goals
  - -- previous performance
  - -- experience of other projects

Step C: Program/Operational Refinement

- Refine program procedures (e.g., participant recruitment, design of service package, employer targeting, follow-on services)
- Refine program goals
- Consider alternate service models
- Refine staff development and training packages

By Project Administrator/Funding Agent: Project Monitoring Efforts

Step A: Descriptive Analysis

- Describe Program Services and Procedures
- Describe Program Costs
- Describe Participants
- Describe Local Context
- Describe Participant Outcomes
- Describe Cost-Effectiveness Outcomes

Step B: Assessment of Effectiveness

- Compare performance to:
  - -- stated goals
  - -- experience of other projects, controlling for variations in participants, labor markets
  - -- experience of other projects, controlling for variations in project design

Step C: Refinement of Priorities/Development Technical Assistance Strategy

- Develop and refine funding goals and priorities
- Develop performance expectations for "best practices" or outcomes
- Develop technical assistance resources

By System Administrator: Overseeing System Transformation and Community Change

Step A: Descriptive Analysis

- Describe Supported Employment Resources and Activities
- Describe System Linkages
- Describe Shifts in Service Utilization Patterns
- Describe Shifts in Expenditure Patterns
- Describe Shifts in Community Attitudes

Step B: Assessment of Effectiveness

- Compare Community and Systems Outcomes to:
  - -- previous patterns
  - -- stated goals

Step C: Refine Priorities/Strategies

- Develop procedural linkages strategy
- Develop funding strategy

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or informal expectations about what the project status should be, and any discrepancies noted. Sometimes observed shifts in performance are merely noted to see whether a new trend is beginning to emerge. At other times, however, a performance measure observed by project managers may suggest that a problem is arising that requires immediate corrective action (e.g., if the number of job terminations initiated by clients increases dramatically during a given reporting period, or if there is a sharp reduction in the availability of health benefits to supported employment participants).

The possible areas of project refinement in response to self-monitoring are far-reaching, ranging from a refinement of employer recruitment practices or an expansion of follow-on services available after placement, to a refinement of program goals or an enrichment of staff training. In an extreme case, the findings from self-monitoring efforts could cause a complete shift in choice of a service model (e.g., targeting a different type of industry for supported employment placements).

When used by an administrator responsible for monitoring a number of different supported employment projects, the analysis of performance data takes on a more comparative and explanatory emphasis. Thus, a state monitor, for example, would be interested not only in how the experiences of different supported employment projects vary, but in the extent to which participant characteristics, labor market contexts, and service models account for variations in observed outcomes.

As shown in Figure 21, one result of an analysis of the effectiveness of different supported employment projects by a state monitor might be to refine the state funding priorities for future funding periods. Another outcome might be to develop criteria describing "best practices" or minimally acceptable performance levels to be used in monitoring local projects. A third response might be to develop a technical assistance curriculum for local projects to disseminate "best practices."

The third level of data analysis shown on Figure 21 is analysis by the administrator most closely responsible for the system transformation and community change objectives of the supported employment initiative. Initially, at least, it seems clear than the data analysis associated with monitoring systems transformation objectives will be descriptive in nature. Shifts in service utilization patterns and resource expenditure patterns will be compared to previous utilization patterns and to state goals. Based on these comparisons, strategies for continued systems change may be developed or refined.

DATA ANALYSIS TO SUPPORT POLICY AND PROGRAM DEVELOPMENT

Data analysis to support policy and program development efforts have the following features in common: (1) they are attempts to go beyond the immediately observable short-term program outcomes to assess longer-term net program effects in light of stated program objectives; (2) they are likely to be conducted on a special project basis, rather than as part of an ongoing reporting effort; (3) they are usually referred to as research or evaluation efforts, rather than as reporting or monitoring efforts; (4) they may or may not be able to utilize data collected on an ongoing basis by program operators; (5) the findings are usually of interest to a larger audience of observers than just program operators and administrators in assessing the success of previous policies and determining whether to continue or amend the tested program designs.

Although the distinction between program monitoring efforts and program evaluation is not usually as clear as it has been presented here, it is nevertheless useful to consider the distinct types of analysis called for by the two efforts. The analyses that are part of a research and evaluation-oriented assessment of supported employment are needed to conclusively answer questions about whether the public investment in supported employment is causing measurable progress towards fulfilling the objectives of the program, and what the relative balance of program costs and program benefits is, from both the taxpayer and participant perspectives. Research analyses are also intended to clarify what program designs and practices are most effective in achieving desired outcomes for what types of participants; that is, to identify how to replicate successful outcomes in other sites (and perhaps also how to avoid the unnecessary repetition of unsuccessful outcomes).

Figure 22 summarizes several of the analytic tasks likely to be included in research analyses of supported employment. These tasks have been divided into three phases:

Phase I: An Explanatory Analysis of Immediate Supported Employment Outcomes;
Phase II: Tracking and Analyzing Longer-Term Participant Outcomes and Net Impacts; and
Phase III: Comparing Net Program Benefits and Costs.

The first phase -- conducting an explanatory analysis of immediate supported employment outcomes -- consists of many of the same activities described under performance monitoring in the previous section. The difference here is that the analyses are oriented towards developing summary measures of effectiveness and cost-effectiveness for the supported employment program as a whole, and in identifying the factors that influence the observed outcomes, rather than towards assessing the performance of any particular project.

In the second phase -- tracking and analyzing the longer-term outcomes and net impacts of supported employment -- the research analyses begin to diverge farther from the performance monitoring analyses. All supported employment projects will theoretically continue to collect data on a participant so long as he or she is in supported employment as part of the the core data recommended for regular collection and monthly or quarterly reporting. However, regular reporting measures are not well designed to track a given individual or cohort of participants after entry into the program. An important set of research analyses will be to track participant status over time in terms of earnings levels, employment stability, employer satisfaction, participant job satisfaction, and other quality of life indicators.

In addition to longer-term longitudinal studies of a given cohort of supported employment participants, the research agenda for assessing supported employment impacts also includes tracking the experiences of a carefully selected control or comparison group not participating in supported employment, in order to determine how supported employment participants would have fared had they not entered supported employment.

Figure 22

Analyses to Support Policy and Program Development

Phase I: Analysis of Process and Immediate Outcomes	Phase II: Tracking and Analyzing Longer-Term Outcomes and Net Impacts	Phase III: Comparing Net Program Benefits to Net Program Costs
• Describing services, costs, participants, participant outcomes, systems change outcomes of the SE program as a whole	• Conducting longitudinal studies to track impacts over time of supported employment on: -- employment stability -- earnings available -- total income -- cost-effectiveness measures	• Identifying all fiscal impacts of the program from the taxpayer's perspective
• Comparing immediate outcomes to stated goals	• Using comparison or control groups to identify net program impacts on participants	• Identifying all fiscal impacts of the program from the participant's perspective
• Analyzing factors influencing outcomes -- participant characteristics -- labor market environments -- service strategy	• Conducting further explorations of program impacts on life quality	• Identifying both economic and noneconomic impact of the program from society's perspective
• Developing effectiveness and cost-effectiveness measures		• Comparing the value of the stream of supported employment costs and benefits from the taxpayer participant and societal perspectives

The difference between the mean observed outcomes for the supported employment participants and the comparison group constitutes the mean "net" impact that can be attributed to supported employment.

Finally, additional research is needed on how to measure several of the supported employment program objectives that are not easily quantifiable, such as increased social integration and improved quality of life. While these objectives reference strongly held beliefs about the benefits of supported employment for program participants, they have not yet been successfully translated into validated measures for use on an ongoing basis in or as part of special research studies.

The third phase of research analyses -- comparing net program costs to net benefits from both the taxpayer and the participant perspective -- is a methodological tool for summarizing all the program impacts that can be quantified in dollar terms and comparing the total balance sheet of costs and benefits from the perspective of the taxpayer contributing public funds to support an individual in supported employment, and from the perspective of the program participant. The findings from benefit/cost analysis can be variously expressed (1) as the ratio of the current value of program costs (incurred now and to be incurred in the future) to the current value of program benefits (experienced now and to be incurred in the future), or (2) as the number of months or years until a financial "break-even" point is reached. What is important to keep in mind in this brief sketch of benefit cost analysis is that the costs included in benefit/cost analysis include not only the direct increased costs of supported employment programming, but also any increases in other public costs associated with supported employment participation (e.g., costs resulting from increased utilization of community support services). Likewise, the benefits, from the taxpayer perspective, include not only any reductions in the cost of day service programming utilized, but also indirect benefits such as increased tax revenues paid by the supported employment participant and reductions in the level of public assistance support received.[1] Benefit/cost analysis is controversial because of its emphasis on assigning a dollar value to each desired outcomes. However, it does offer a way to provide information about whether the supported employment program makes sense as a financial investment, from a purely economic point of view. A more comprehensive approach to benefit/cost analysis would include analysis of non-economic benefits also.

The following chapters discuss the priorities for the research agenda for supported employment in more detail, and describe the need for the collection of additional data to support these research efforts. Two of the types of research analyses described above are most likely to require data collection above and beyond the efforts undertaken by individual projects. The first is the analysis of data on outcomes experienced by comparison or control group members (since these individuals are, by definition, not included in a project's client-level data base). The second type of analysis that would require additional data collection is the analysis of net costs and benefits, since this analysis requires drawing on so many additional data bases for data (e.g., on tax revenues paid and on the cost of services provided by other community agencies to supported employment participants.

NOTES

[1] Of course, from the participant perspective, any reduction in transfer income would be viewed as a cost, not a benefit.

VII. IDENTIFYING RESEARCH ACTIVITIES

OVERVIEW OF THE ROLE OF RESEARCH IN ASSESSING PROGRAM PERFORMANCE

Part II of this report has outlined a core set of consensus measures that could be implemented in a standardized way across projects and/or states to summarize major aspects of program performance. Additional measures have also been presented that an individual project or state might want to include in its ongoing data collection and analysis for use in program management. These recommended core measures and proposed supplementary measures have been developed with careful attention to the feasibility and appropriateness of implementation on an ongoing basis and are built upon the availability of existing measures in the field. This is the first such effort to identify common performance measures for supported employment programs and is occurring at a time when nationwide efforts are still in their infancy. It is to be expected, then, that there are gaps in the existing array of measures where further research is needed. Similarly, there are areas of performance measurement where ongoing collection and analysis of data for the universe of participants would simply be too burdensome or where a one-time research effort is more appropriate.

There are five major types of evaluation research to consider when building a research agenda for assessing the performance of supported employment programs and conducting analyses to support policy and program development:

(1) development of new measures where none currently exist or where the current state-of-the-art is inadequate to fully address a given measurement domain;

(2) collection and analysis of data for a representative sample of participants over time and/or in conjunction with a comparison group;

(3) collection and analysis of data from outside of the supported employment program such as the amounts of transfer payments received or taxes paid, parallel data

collection for a comparison group, or information about relevant environmental factors;

(4) observation of program performance by an outside observer such as in the development of qualitative studies or identification of "best practices"; and

(5) secondary analysis of existing data using complex statistical analyses or mathematical modeling such as in the multivariate analysis of factors contributing to success or in the development of benefit-cost models.

The following pages review each of the performance measurement domains described earlier and identify research activities that, in conjunction with the core and supplementary measures described in Part II, provide the basis for a comprehensive evaluation of supported employment efforts. The final chapter prioritizes a research agenda with recommendations for those activities for which there is the most apparent and immediate need.

IDENTIFYING RESEARCH ACTIVITIES FOR EACH OF THE MEASUREMENT DOMAINS

As described in Part I, the process of developing proposed measures to be considered during the consensus-building process involved identifying a wide range of program objectives and performance questions to be addressed in assessing program performance. As described in Part II of this report, many of these aspects of performance can be appropriately addressed through ongoing performance monitoring. However, within each of the eight identified measurement domains there are a number of aspects of measuring program performance that have been identified as being more appropriate as one-time or periodic research and evaluation activities.

EMPLOYMENT OUTCOMES

As described in Chapter IV, ongoing data collection and project-level reporting offer the potential for monitoring a range of employment outcomes including measures of employment status, earnings, hours worked, and length of time employed. However, these data are not sufficient to address the full range of performance questions about employment outcomes identified through the consensus process. Thus, the following areas of additional research have been identified as essential to a comprehensive assessment of program performance:

- changes in participant earnings and employment stability over time;
- comparison of participant earnings with those of traditional habilitation and day activity programs; and
- comparison of participant earnings and employment stability with coworkers or employees in comparable jobs.

Changes Over Time

While the supplementary measures proposed in Figure 12B include employment status and mean earnings at various points in time following enrollment, they are summarized across the total program and do not include a comparison of specific cohorts of participants at different points in time. Thus, the proposed supplementary measures include the **percentage of participants employed** and **participant mean earnings** during the fourth, eighth, and twelfth quarters following enrollment. Data being collected on an ongoing basis for individual program participants could be further analyzed to provide a more comprehensive picture of changes in earnings and employment stability over time. We propose that such analyses would be conducted for individuals in a selected sample of participants and might include such measures as:

- mean weeks worked during second two quarters of program participation as a percentage of weeks in the first two quarters;
- mean weeks worked during the second (or third) year as a percentage of weeks worked in the first year;
- mean monthly earnings during second two quarters of program participation as a percentage of earnings in the first two quarters;

- mean monthly earnings during the second (or third) year of program participation as a percentage of earnings in the first year; and
- mean hours worked per week during fourth, eighth, or twelfth quarter as a percentage of hours worked in the second quarter after enrollment.

Assuming that the sample is representative of the participants in a given program (if large) or across a state, it will be possible to use these outcome measures in further analyses that explore factors associated with "success." That is, over time, as larger numbers of participants reach their second and third year following enrollment and as program models become more established, it may be possible to identify specific approaches that contribute to long-term successful outcomes.

Comparison with Other Programs

The comparison of earnings of supported employment participants with those of participants of other programs is considered by most concerned individuals to be a key aspect of measuring performance. This is especially true in light of systems change strategies that emphasize shifting resources from existing habilitation and day activity programs to supported employment.

This comparison will require collecting data from a comparison group of traditional habilitation and day activity programs or from summary statistics on the outcomes of these other programs and analyzing these data in conjunction with a representative sample of supported employment participants. It will be important to match comparison groups in terms of participant characteristics or control for participant characteristics when conducting the analyses. This kind of analysis would probably be conducted as the supported employment program matures. However, it is not the kind of analysis that would be needed on an ongoing basis or that would need to be conducted for every project.

The following are examples of the kinds of measures to be included in an analysis of this kind:

- mean hourly wage during hours worked of supported employment participants as a percentage of mean hourly wage of participants in:
  - -- sheltered workshops,
  - -- work activity programs,
  - -- other vocational programs targeting individuals with severe disabilities, and
  - -- day activity programs,

  who are not involved in supported employment;
- mean monthly earnings of supported employment participants as a percentage of mean monthly earnings of participants of:
  - -- sheltered workshops,
  - -- work activity programs,
  - -- other vocational programs targeting individuals with severe disabilities, and
  - -- day activity programs,

  who are not involved in supported employment.

Comparison with Coworkers

One of the central concepts of supported employment is the "normalization principle," which simply maintains that individuals with disabilities be given the opportunity for experiences that are equivalent to those of the general population to the maximum extent possible. Thus, when assessing outcomes such as duration of employment and earnings levels, it is important to view them in the context in which the individual participants are working.

This comparison is included here as a research issue rather than being included in the ongoing measures in Chapter IV because it requires collecting additional data from outside the supported employment program. It is anticipated that these data would be collected for a selected comparison group and compared to a selected research sample of supported employment participants. Measures used might include:

- mean hourly supported employment wage as a percentage of mean hourly wage for comparable jobs at entry;

- mean monthly supported employment earnings as a percentage of mean monthly earnings for comparable jobs at entry; and
- length of time (number of months) in same supported employment job as a percentage of number of months in same job for comparable employees.

QUALITY OF EMPLOYMENT

Perhaps the most difficult aspects of performance to measure are those that involve the concept of "quality". Much has been written about the measurement of quality in human service programs. This body of literature has struggled to identify the aspects of quality that are highly valued in the field and to develop proxy measures that best reflect the most difficult aspects to measure. Measures of the quality of employment for supported employment participants are no exception. While a number of proxy measures can be identified, the true dimensions of quality are much more difficult to address. The core and supplementary measures described in Chapter IV include a set of employment characteristics that offer descriptive information about employment placements and the reasons why participants leave their jobs (Figures 13A and 13B). The descriptive information provided by these measures can be interpreted as proxy measures of quality to the extent that some value has been placed by a particular program on the types of work or reasons for termination that are considered most desirable. However, the measures themselves are truly value free and though they offer some information about the nature of the employment situation, to effectively address the important aspects of the quality of participants' employment, further development of measures will be needed.

In a field that emphasized "normalization" it is perhaps not surprising that the aspects of quality of employment considered by respondents to be important to supported employment are the same as those valued for anyone in the workforce. The following areas have been identified as important to include in a research agenda for assessing the quality of employment for supported employment participants:

- goodness of fit or appropriateness of the match between the job and participant's skills and interests;
- quality of the work environment;
- employment mobility (horizontal and vertical); and
- analysis of the relationship between the type and quality of employment and other outcomes.

Job Match/Goodness of Fit

Job matching efforts as part of the initial placement process can range from efforts to provide the employer with the most highly qualified applicant through a simple matching to ensure that essential skills are present, to efforts to ensure that jobs offer participants the richest possible employment experience including stimulation, challenge and an opportunity to learn new skills. Existing job matching procedures focus on collecting information about skills, behaviors, and job requirements. However, there are other aspects of the match between workers and jobs that could be further explored in order to develop measures of the goodness of fit. These job match measures would be an approach to assessing the quality of participants' employment in addition to using them during the placement process. Some examples include:

- compatibility between how job performance is measured (e.g.speed of production, attention to detail, ability to do a wide variety of tasks) and participants' abilities;
- extent to which the nature of the work is compatible with the interests of the participant; and
- compatibility of supervisor's management style with participant's communication abilities and need for structure; and
- extent of participant's satisfaction with the job (as a post-placement measure rather than one for use during the matching process).

There may, of course, be many other measures that are important to assessing the goodness of fit. As part of an evaluation effort, the effectiveness of various job match measures as predictors of job success can be tested by comparing the scores for participants who retained a job for a given period with those who terminated from their jobs (while controlling for other factors). The utility of job match measures for ongoing performance assessment include testing whether the project or state has achieved a reasonable match for a high proportion of its participants. Another use of job match as a performance measure may be to decide that the job matching process itself is a desirable feature of project operations, and then to assess whether a given project has adequate procedures for identifying the job requirements and other relevant features of the employment placement and matching these to participants' characteristics.

Quality of the Work Environment

Discussions with consumers highlighted the importance of considering the work environment, as well as the nature of the work itself, when assessing the quality of an employment situation. (In fact, evidence suggests that from the consumer perspective, supervisor-coworker relationships, extent of emphasis on speed, and nature of the work environment may outweigh wages and hours as criteria for assessing the desirability of a given employment situation). However, before the quality of the work environment is measured, research is needed to determine the aspects of the work environment that are highly valued by participants and that appear as determinants of job success. Work is also needed in defining data items and performance measures that can be used to assess the quality of these aspects across varied work environments. Some of the areas identified, so far, as possible aspects of the work environment for which measures might be identified or developed include:

- the physical work environment - e.g., space, light, air;
- the quality of interactions with supervisor and coworkers - e.g., communication, information sharing, attitudes of supervisor and coworkers; and
- the appropriateness of job accommodations made.

Employment Mobility

One of the aspects of employment quality that we value highly in our society is the upward mobility potential of a job. This value may seem to be somewhat misplaced in the context of supported employment, given that the target population is individuals whose potential for competitive employment is limited by their disability and who are expected to always need ongoing support in order to sustain employment. However, the need for flexibility in employment options and the opportunities for horizontal as well as vertical mobility can be as important for individuals with severe disabilities as for their nondisabled coworkers. Perhaps one of the reasons that this issue has been raised in the context of supported employment is because many consider it an employment option that attempts to improve the limited employment options that have been available through more traditional habilitation programs.

It is important to note that the issue of employment mobility and the availability of a range of employment options and choices for participants is not valued to the same extent by all operators and policy makers involved in supported employment. Some consider the major goal to be obtaining employment options for participants. The concept of offering a range of options with opportunities for advancement or horizontal mobility seems far-fetched and a concern that would be better addressed many years down the road when the first basic employment needs are met. However, others have stressed the importance of assessing not only the opportunities for mobility but the actual extent to which participants move vertically or horizontally during their years of employment. Further research is needed about the importance of mobility to long-term program success and the ways in which it might reliably and easily be measured.

Relationship of the Quality of Employment to Other Outcomes

The concept of "quality" implies a set of values about the nature of the employment placement that theoretically should be closely linked to the length and stability of that employment. That is, a well matched "meaningful" job in a good environment is theoretically one in which the participant is likely to remain the longest. Quality of the employment may relate to other outcomes also such as the impact of supported employment on quality of life. The analysis of these relationships can help guide program operators in identifying those aspects of employment quality that appear to be most important to emphasize when identifying potential jobs for their participants.

OPPORTUNITIES FOR WORKSITE INTEGRATION

As described in Chapter IV, the issues of integration at the worksite include both the extent to which disabled individuals work in environments in which nondisabled coworkers are present and the nature and extent of interaction between disabled workers and their coworkers. Several measures of the degree to which nondisabled workers are present were identified in Figures 14A and 14B. However, a number of research topics have been identified that are important to assessing the extent of integration or elimination of segregation in the workplace such as:

- exploration of definitional issues in measuring the proportion of individuals in a given work setting who are disabled;
- development of measures of the nature and extent of interaction between supported employment participants and their nonsupported coworkers; and
- analysis of the relationship between worksite integration and other outcomes.

Proportion of Disabled Workers

The proxy measures of the extent of integration, included as core consensus measures, are limited to measures of the type of supervisory structure, whether or not nondisabled workers are present, and the numbers of supported workers in a group placement. Efforts to measure the actual proportion of disabled workers in a work setting were considered supplementary partially because of concerns about the difficulty of capturing this measure in all settings. In small companies, clearly defined work settings, or for certain types of supported employment models, the computation of a percentage of disabled workers is straightforward. In those particular projects this measure could easily be collected on an ongoing basis. However, a large variety of exceptions were noted where additional work is needed to explore the implications of different approaches to operationalizing measures of proportion in areas such as:

- -- the individuals to be counted on the "disabled" side of the ratio--only supported workers or all workers with disabilities?
- -- what constitutes a "work setting" - how large is it? a single room within a larger building? the whole building? only the area where workers interact with each other?
- -- how should mobile work groups be handled? how might their varied and changing work environments be taken into account?

Extent and Nature of Interaction

Respondents throughout the study have stressed the importance of going beyond the perfunctory placement of severely disabled individuals into environments where nondisabled people are present, emphasizing the importance of meaningful contact between coworkers as an essential indicator of integration. Some preliminary measures of interaction have been suggested, though much more work is needed to expand, test, and refine them before any could be broadly implemented. Examples include:

- % of supported workers interacting with nondisabled co-workers:
  - -- during work tasks;
  - -- during breaks or travel to and from work;
  - -- not at all;
- % of supported workers in each of the following situations:
  - -- exposed to nondisabled during the work day but with limited interaction;

-- has continuing opportunity for interaction but work tasks are largely independent of the need for coworker interaction;

-- has significant number of daily experiences which require cooperative interaction with nondisabled coworkers;

-- has interactions with nondisabled coworkers to the same degree that nondisabled workers do; and

-- develops relationships with nondisabled coworkers that extend beyond the work setting.

In-depth discussion about the issues of measuring the degree of integration at the worksite have raised a number of important concerns that need to be taken into account in approaching this somewhat sensitive and emotionally charged issue. For example:

- Many study respondents have cautioned against focusing exclusively on integration at the worksite itself, and have encouraged exploring the degree of integration into the community at large also. (See Quality of Life measures later in this chapter and in Chapter IV.) Other actors feel that supported employment programs have more of a secondary effect on community integration for which they should not be held directly accountable and thus consider it inappropriate as an area to include in performance measures.
- One of the values held dear by many individuals involved in supported employment efforts is that of maximizing self-direction and choice for participants. Thus researchers are cautioned against a priori assumptions about the social behaviors that indicate "success". Some participants may not choose to socially interact to the same degree as others, and some participants may choose not to develop "meaningful relationships" with nondisabled coworkers. Integration is probably something that

one allows to happen rather than something one causes to occur.

- The degree to which a work environment provides opportunities of integration involves not only the mixing of disabled and nondisabled workers and the extent to which interaction is required or encouraged, but also a whole set of attitudes and changes in perceptions about the potential of individuals with severe disabilities as productive members of society. Thus, measuring the attitudes of the nondisabled supervisors and coworkers may be an important aspect of assessing the extent to which supported employment programs are successful at reducing the segregation of disabled individuals in the work force.

Relationship Between Worksite Integration and Other Outcomes

As mentioned previously, one of the important potential effects of work site integration to be measured is its influence on community integration. For many participants interaction with nondisabled coworkers provides an opportunity to develop social and communication skills that strengthen their ability to function in the community. Conversely, for many participants success at work will be dependent on participation and success in nonwork environments.

Degree of integration can be anticipated to be related to other outcomes also. Assuming that further research is able to yield valid and reliable quantitative measures of the degree of integration, multivariate statistical techniques can be used to analyze the effect of work site integration on outcomes such as job skills, job satisfaction and employment stability.

ONGOING SUPPORT

The core and supplemental measures of ongoing support described in Chapter IV provide basic information about the type and intensity of support provided. These measures are fairly straightforward for ongoing data collection and can be used to conduct further research into the nature and effectiveness of ongoing support. Four areas have been identified for consideration when developing a research agenda:

- refinement of measures of intensity of support;
- further study of the nature and role of nonpublicly funded support;
- analysis of the changes in intensity of support received over time; and
- analysis of the effectiveness of different types and levels of ongoing support.

Intensity of Support

Currently, supplemental measures of ongoing support have been identified that estimate the average number of hours and costs of support per participant for different types of support. Discussions with researchers and practitioners suggest that these measures will be essentially project-level descriptors of the total amount of each type of support provided by a project, averaged over all of the project's participants. Further exploration of approaches to measuring intensity of support for different types of program models may yield practical solutions to the difficulties of measuring support at the client level. Another possible refinement to be explored would be for projects to report individual amounts of support received by participants in individual placements, and group averages for participants in group work stations or work crews, with any aggregation of these data being done separately for individual and group models.

Nonpublicly Funded Support

In the strictest sense of the term, supported employment implies support that's publicly-funded. In fact, if this distinction were not made, then the differences between supported employment and regular competitive employment become more difficult to ascertain. However, even within the context of supported employment programs providing publicly-funded support, a variety of additional sources may also be brought to bear on the full range of support needs of the participants. Probably the most common sources of nonpublicly funded support that programs are likely to encounter include the employer and the participant's family, charitable giving and perhaps even the purchase of support by the participant.

Possible measures of nonpublicly funded support might include:

- types of nonpublicly funded support utilized;
- mean hours of nonpublicly funded support by source;
- mean cost of nonpublicly funded support by source; and
- extent of nonpublicly funded support as a proportion of total support provided.

These measures would be based on data collected for a selected research sample. While ongoing data collection and analysis would not be necessary, measurement at several points in time over the next five or ten years would provide valuable insights into how the relative share of costs shifts as the program matures.

Changes in Intensity of Support Over Time

While basic measures of intensity of support as described earlier may be constructed as project level measures, an important aspect of understanding the intensity of support provided involves exploring the extent to which an individual's experience changes over time. Some program models are specifically designed to "fade" or decrease the amount of support provided over time. Others may tend to decrease support, given the decreased needs of some participants, while maintaining fairly constant levels for others. In still other cases, there may be occasional increases and decreases over time as participants learn new tasks, change jobs, and/or face various life changes outside of work that increase their need for on the job support. In any program model there is likely to be some period in the very beginning of a participants involvement with the program when support is particularly intense.

Research into the ways support changes over time would be conducted for a sample of individuals employed continuously over a specific research period. Such a research activity might include measures such as:

- mean hours of support during the second (third, fourth, etc.,) quarter of program participation compared to the first;
- mean cost (assuming that costs include other expenses besides staff hours) of support during the second (third, fourth, etc.,) quarter of program participation compared to the first; and
- comparison of the above for different types of programs and different types of participants.

Effectiveness of Different Types and Levels of Support

Once measures of intensity of support have been refined, and data have been collected over a long enough period, multivariate statistical techniques can be used to analyze the effect of different types and intensities of ongoing support on different outcomes while controlling for variations in program, participant, and environmental characteristics.

QUALITY OF LIFE

By far one of the most difficult domains to capture through performance measures, and perhaps one of the most controversial issues has been the effect of supported employment programs on participants' quality of life. As mentioned in earlier chapters, some controversy exists about the appropriateness of holding programs accountable for their effectiveness in improving quality of life. Others propose that quality of life measures should simply be considered descriptive. Some proponents of accountability insist that quality of life is a (or "the") major goal of supported employment without which other outcomes are essentially meaningless. Opponents, on the other hand, maintain that the goal of supported employment is simply employment and that impacts on the quality of life are secondary effects for which programs should not be held accountable.

Another controversy about quality of life measurement exists in how it should be measured. Some actors feel that participants' self-report would be the most valid approach assuming that methods are found that are effective for individuals with severe communication and cognitive impairments. Others recommend observational techniques or composite measures of multiple indicators. Some simply feel that quality of life is too difficult a concept to capture through standardized measures and will always belong in the domain of research.

With all of the reservations and concerns that exist there is general consensus that the impact of supported employment on quality of life should be assessed. Since no measures have been identified to date as core consensus items, a major priority for research efforts will be to explore the feasibility of developing measures for standard implementation. Suggested areas in which research should be conducted include:

- degree of community integration and participation;
- changes in participants' expendable income; and
- changes in other quality of life indicators.

Community Integration and Participation

The issues of measuring community integration are similar in some ways to measuring integration at the work site. The concept of integration combines both presence of disabled and nondisabled individuals in the same environment and social interactions between them. Another aspect of community integration that shows promise for inclusion in performance measures is the extent to which participants access other community resources and activities. Research efforts in the area of community integration should focus on developing measures that can be adopted as ongoing measures of program effectiveness.

Expendable Income

While the outcome measures described earlier include measures of earnings, increased earnings do not necessarily mean an improvement in financial situation. One indicator of the extent to which participation in supported employment improves quality of life is the effect on expendable income. Here the term "expendable income" is used to mean money available for spending on improving one's quality of life, or money left over after life's necessities have been paid for. It is important to note that expendable income may also decrease for a given participant, especially if the receipt of work income affects his or her eligibility for public income support.

The measurement of expendable income is particularly complex for this population for a variety of reasons. Perhaps one of the greatest causes of difficulty relates to participants' living situations. Many participants may live with parents who still manage their income. Thus, the effect on the participants' own personal income will be as reflective of parents' willingness to trust their severely disabled offspring with their own money and choices of how to spend it as with the actual financial effect of supported employment on the family. Similarly, because of the severity of disability of the target population, many individuals may reside in board and care facilities or other residential programs that again, may have responsibility for managing residents' money or may even have sliding scale fees that are affected by the residents' income. Some participants may change living situations either as a result of or in tandem with their participation in supported employment. New housing situations may be more or less expensive than previous one and may indicate an improved quality of life in and of themselves independent of expendable income.

Research activities for assessing the effect of supported employment on expendable income would probably be conducted periodically for a selected research sample rather than becoming part of the ongoing performance monitoring process. This assessment might include measures such as:

- mean increase or decrease in expendable income across participants;
- differences in changes in expendable income for different types of participants, different types of programs, or across different environmental characteristics; and
- benefits or disadvantages of increases or decreases in expendable income.

Quality of Life Indicators

A number of indicators in addition to those mentioned earlier have been identified as potential measures of quality of life. Preliminary efforts to develop data collection instruments and a summary score or "index" are being pursued in several locations around the country. Refinement and practical applications as standardized measures are still several years away, however. Some researchers caution against assuming transferrability of measures from one community setting to another, where economic conditions, cultural differences and other factors may greatly affect the reliability of scores across locations. Examples of indicators being considered for further development include:

- health status;
- attitudes towards others;
- self-esteem;
- skill levels;
- use of leisure time;
- social and friendship networks; and
- degree of self-direction.

SYSTEMS CHANGE

Chapter IV describes a variety of measures that can be collected by states on an ongoing basis to monitor the extent of systems change. There have been several additional systems change issues identified as important to consider in developing a research agenda that would not be a part of this ongoing monitoring system including:

- effects of supported employment on the attitudes and hiring practices of employers;
- relationships between funding flows and the flow of participants into and out of supported employment; and
- areas in which system change seems crucial to program success.

Employer Attitudes and Hiring Practices

The supported employment concept challenges the most basic attitudes about competition and success in the American workplace. It is based on the premise that all individuals should have the opportunity to be productive and contribute to society to the best of their ability, even if they are not the most qualified, fastest or most productive individuals in the workplace. This concept challenges employers to rethink how they view disabled workers, and reassess where disabled workers may fit into the labor force, even those workers who will never be independent of the need for assistance on the job. Thus, one important indicator of the extent to which supported employment programs are affecting the system as a whole is evidence that the labor market itself is opening up to supported workers through changes in employer attitudes and hiring practices.

Relationships Between Funding Flow and Participant Flow

One research issue that could be of great help to planners and policy makers would be an analysis of the effect of different approaches to funding supported employment programs on the flow of participants into and out of supported employment. While overall goals and valued outcomes of supported employment are often voiced about the intended shifts in the service system from traditional habilitation and day activity programs to supported employment or serving individuals traditionally excluded from vocational programs, the individuals who are in fact served may be greatly affected by the flow of funding into supported employment and the perspectives and constraints of various funding sources. Similarly, efforts to identify sources to fund specific aspects of supported employment such as training versus ongoing support may also affect participant flow patterns.

System Changes Essential to Success

Because supported employment represents such a major departure from traditional rehabilitation, both service providers and policy-makers have expressed the need for major changes in how the service delivery system operates in order for these efforts to be successful. One particular area suggested for further research is a study of the need for centralized outreach and assessment mechanisms. This type of research would be conducted as a one-time activity using a case-study approach.

PARTICIPANT CHARACTERISTICS

A number of research priorities were identified in the area of describing and analyzing the characteristics of individuals participating in supported employment programs including:

- development of standardized definitions of severity of disability;
- exploring the development of a case difficulty index as an alternative or supplement to severity measures;
- analyzing the variations in outcomes and service approaches for different types of participants; and
- assessing the relationship of enrollee characteristics to project or program objectives.

Severity of Disability

Standardized IQ scores are proposed as measures of the level of severity of mental retardation, although they need to be supplemented by other functional assessments such as communication skills. Similar standardized measures don't presently exist for other types of disabilities. Given the focus of the program on serving individuals with severe disabilities it was considered by most respondents to be an important research priority to identify standardized measures of severity.

Case Difficulty Index

Comparing the effectiveness of supported employment models and approaches across different providers and states will be extremely difficult without some way of taking into account the kinds of individuals being served by the program. Certainly characteristics such as severity of disability and immediately prior service setting will be useful, but it has been suggested that a more comprehensive index of case difficulty be explored that might include a variety of functional and basic skills as well as characteristics such as work history and educational level.

Relationship Between Participant Characterstics and Outcomes

As described earlier, there is much concern in the field about the use of data on participants for assessing program performance. This is largely related to concerns that evaluations of performance across different types of participants could be used to target the programs towards specific types of individuals. While targeting seems appropriate in the context of ensuring that individuals who receive services really need them, the intent of the supported employment effort would be undermined if the program were targeted towards individuals most likely to succeed. For most social service programs, the analysis of the charcteristics of program participants and the relationship between those characteristics and program outcomes is appropriately used to target the program towards individuals with a high likelihood of success. However, since supported employment is intended as an alternative for individuals who have shown limited employment potential, this kind of analysis is most appropriate for assessing whether certain kinds of supported employment options and methods of support appear to be effective for different kinds of individuals, and how participants can be offered the widest possible range of opportunities.

Relationship of Enrollee Characteristics to Program Objectives

Not all supported employment programs or local projects have developed clearly defined objectives regarding the types of individuals to be targeted for supported employment services. However, global goals exist as part of the very definition of supported employment. Thus, one component of a comprehensive evaluation effort would be to see to what extent the population served through this service approach is consistent with the program intent to serve individuals traditionally excluded from vocational rehabilitation. In some cases, programs or states have more specific objectives for populations to be targeted such as individuals currently in day activity centers versus those transitioning out of special education or specific disability groups such as the mentally ill. In the cases where more specific target population objectives have been formulated, a comparison of participant characteristics to targeting objectives becomes particularly important.

SUPPORTED EMPLOYMENT COSTS

The core and supplementary measures described in Chapter IV include a range of measures of program costs and benefits that address all of the major cost questions that need to be addressed on an ongoing basis. However, there are a number of research activities that have been identified for inclusion in the proposed research agenda including:

- analysis of the net fiscal impacts of supported employment.
- analysis of the specific costs of supported employment at the client level; and
- analysis of how taxpayer costs and benefits and participant financial benefits vary across project models;

Net Fiscal Impacts

The concept of net impacts is that of identifying the extent to which changes that occur are attributable to the intervention, or the extent to which outcomes exceed those that would have occurred in the absence of the program. The analysis of net fiscal impacts requires the collection of data from outside of the supported employment systems (e.g. transfer payments, social services utilized) own data base, and from a comparison group of nonparticipants from outside of the supported employment program.

An analysis of net fiscal impacts from a taxpayer perspective would involve collection of data for a research sample of both supported employment participants and a comparison group on items such as:

- transfer payments (SSI, SSDI, other cash assistance, food stamps, medical benefits) received during a baseline period;
- transfer payments received during a study period after the participants entered supported employment;
- cost of social services utilized during a baseline period

(day programs, residential programs);

- cost of social services utilized during a study period after the participants entered supported employment (including taxpayer cost of participation in supported employment project);
- tax revenues paid during a baseline period; and
- tax revenues paid during a study period after the participants entered supported employment.

Analysis of net financial impacts on participants would include data such as:

- uncompensated work expenses incurred during a baseline period;
- uncompensated work expenses incurred during a study period after the participants entered supported employment;
- earnings, net of taxes withheld, during a baseline period;
- earnings, net of taxes withheld, during a study period after the participants entered supported employment;
- transfer payments receiving during a baseline period; and
- transfer payments received during a study period.

Client Level Costs

Cost measures as described in Chapter IV are based on project-level costs rather than costs for specific individuals. Collecting client-level cost data is particularly problematic for program models where staff time is shared across a number of individuals in a group setting or where support and supervision are provided simultaneously by the same individual. However, for a selected research sample, it would be feasible to construct cost measures on an individual basis that would allow for a finer level of detail in analyzing the costs associated with different approaches and levels of support.

Variations in Benefit/Cost Ratios Across Models

The analysis of variations across different types of supported employment models would use existing data being collected for other measures. Comparisons of society, taxpayer, and participant benefit/cost measures across different program models would be conducted on a periodic or ad hoc basis once the program matures and benefit/cost models have been refined. A comprehensive analysis would also include noneconomic costs and benefits.

IDENTIFYING BEST PRACTICES

The research activities described above are each specific to a particular domain of measurement. However, across the whole range of supported employment performance questions there is an important cross-cutting issue that must not be overlooked. As described in Chapter III, there are many important evaluation questions about how various practices, procedures, program models, and the relative priority given to various program objectives can influence program outcomes. The evaluation of practices and procedures contributing to success might be conducted by an outside party and would include:

- gathering descriptive information about program implementation procedures and service processes;
- gathering informed opinion about the practices that seem to be innovative and particularly effective;
- conducting a cross-site analysis of information collected about practices and procedures in conjunction with outcome data; and
- exploring the transferability and feasibility of practices in varied settings.

VIII. PRIORITIZING THE RESEARCH AGENDA

The previous chapter outlines a broad and ambitious set of research activities that have been identified during the course of this study as important to a comprehensive assessment of the performance of supported employment programs and the impact of the national supported employment initiative. However, not all of these research activities are appropriate for immediate implementation, nor are all necessarily of equal importance. In order to develop a reasonable and practical research agenda it is important to prioritize among these various topics and activities. There are a number of questions to ask about these research issues in order to prioritize them into a workable agenda including:

- How important is the timeliness of the research? How soon are the findings of the research needed?
- Has the program had sufficient experience to offer an adequate data base for the research? Is the program sufficiently mature for this research to be appropriate?
- To what extent will findings of the research be important for improving program performance? Will the findings affect social policy?

DEVELOPING MEASURES FOR ONGOING PERFORMANCE MONITORING

Using the above criteria, one concludes that the first priority for further research will be development of measures in some of the areas where adequate measures and standardized definitions do not currently exist. Should the development of standardized measures in these areas prove feasible, these measures can be included in the existing core and supplemental data sets for ongoing collection. Activities to develop and refine measures to be included in ongoing data collection are an early priority so that important information is not lost during these initial years of program operation. Priority areas for development and refinement of ongoing measures are as follows:

- measures of participant characteristics including:
  - -- severity of disability, and
  - -- overall case difficulty;
- measures of the degree of integration including:
  - -- refinement of measures of the proportion of disabled individuals in the work setting, and
  - -- measures of the extent and nature of interaction between disabled and nondisabled coworkers; and
- refinement of measures of the intensity of support provided.

The development of measures in these three areas are also recommended as a first priority because of their importance to the other kinds of research to be conducted. Assessing net impacts and benefit/cost can not readily proceed until better descriptions of program participants are developed. The vocational rehabilitation (VR) and developmental services (DD) systems currently use quite different disability categories and definitions of the severity of disability that are not only incompatible with each other but are also considered by most respondents to be inadequate for this program. Similary, identifying approaches to program improvement will be difficult without better descriptions of the types and intensity of support provided and the degree of integration offered through existing models.

Other areas for development and refinement of ongoing measures were also identified. These are areas in which research might be of a long term nature and while potentially equally important to the three areas above, should perhaps be investigated concurrently with, rather than prior to, identifying program improvements and assessing net impacts and benefit cost. These include:

- measures of the quality of employment including:
  - -- the goodness of fit or appropriateness of the match between the job and participant's skills and interests, and
  - -- quality of the work environment;

- measures of quality of life including potentially developing a composite index of a variety of quality of life indicators if feasible; and
- measures of the costs and benefits of supported employment.

IDENTIFYING APPROACHES TO PROGRAM IMPROVEMENT

The second major priority for the research agenda are those activities that can produce readily usable results for improving program operations. Once outcome measurement approaches have been refined, three major types of research activities are needed to identify the factors that contribute to program success:

- collection of data on environmental characteristics from outside of the supported employment data system;
- multivariate statistical analysis of the relationships between various program characteristics, environmental factors, participant characteristics and outcomes; and
- collection and analysis of implementation processes and service procedures to identify "best practices".

ASSESSING NET IMPACTS AND BENEFIT-COST

The third major priority for the research agenda is assessing net impacts and summarizing relative benefits and costs of supported employment. While this topic may not be any less important from a policy point of view than the above two, it is less urgent in terms of the timing of the research and the need for maturity of the program before activities are undertaken. While the above research activities would take place in an environment where a commitment to funding and implementation is already in place, this third priority is essential to making policy decisions about further investment in or expansion of supported employment opportunities for individuals with severe disabilities.

NEXT STEPS TOWARD INITIATING RESEARCH ACTIVITIES

This study has helped lay the groundwork for the identification of not only the relevant and priority research topics, but also of some of the current "experts" in particular aspects of supported employment. It will be important to continue this identification process in order to build on the existing knowledge base through the exchange of theories and practices. As communication linkages hopefully increase between and across projects, states, research groups, and involved federal agencies, it will be important to encourage further discussion of the relative importance of research activities. This information from the field at large will be essential, as federal policy makers consider what research activities to encourage and support. Similarly research institutions and state agencies themselves may wish to be guided by the issues raised here as they develop their own research agendas.

Perhaps one of the most important lessons to be noted is the importance of effectively utilizing information developed through the experiences of programs and researchers in similar or related fields. The BPA study included reviews of materials from special education, school-to-work transition, sheltered employment, and traditional vocational rehabilitation programs. However, much more cross-fertilization is needed in order to make the best use of knowledge from these fields. As we look towards developing future research activities it will be important to take advantage of existing data bases, data collection mechanisms, measurement approaches, and instruments to the maximum extent possible. This implies the need for further dialogue between key researchers and policy makers in the supported employment field and experts in fields such as residential services and special education.

CONCLUSION

The contents of this volume are not intended to provide a single fixed, final, or authoritative set of performance measures to be applied to all supported employment programs. Rather, the intent has been to provide a consistent but flexible approach to measuring performance for supported employment. Within each project and/or state system a set of data items and measures can evolve that meets the particular program configuration, policy interest, and information system capabilities present. Thus these measures represent an approach that can be customized to the needs of each state in such a way that they can be translated and aggregated across states.

As stated elsewhere in this report, the development of performance measures that can be used to assess program success and relative project effectiveness and cost-effectiveness in furthering supported employment objectives will be a gradual process. The first necessary phase in this process will be the implementation and monitoring of comparable data collection practices across a variety of projects and states, to ensure data quality and to describe the range of program design included under the rubric of supported employment. Only after the variations in program models are well understood and the comparability and accuracy of reported data have been ensured can the second phase of performance measurement begin.

During the second phase of performance measurement, administrators, evaluators, and researchers will be able to begin using these data to address issues of relative effectiveness and cost effectiveness of supported employment compared to other programs, and of different models of supported employment compared to each other. It should be cautioned that using performance measures to compare supported employment projects to another will never be a simple activity. Comparisons across programs must take into account variations in the characteristics and previous experiences of the participants served by the programs, as well as variations in the labor market contexts of the project sites. Perhaps the most direct application of the performance measures will be for a single project to use them in monitoring its own success in meeting desired goals or improving on its past performance levels.

The most complex levels of performance assessment -- the net impact and benefit/cost analyses described in the previous chapter — are not likely to be pursued by a single project or even by a single state acting independently. Strong and coordinated national leadership will be necessary as a catalyst for progress in this area for two reasons. First, the level of resources that will need to be devoted to these analyses is substantial, and is likely to be committed only with considerable federal assistance. Second, the types of questions addressed by these analyses are likely to be federal policy issues. These issues are (1) whether to continue to encourage the shift of day program resources from day activity and work activity programs towards supported employment, and (2) ultimately, whether to expand the opportunities for supported employment by increasing the level of resources devoted to this program.

APPENDIX A:

STUDY RESPONDENTS

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Ruth Aledort	Job Path, New York	Project Level
Katie Banzhaf	Star Center, Connecticut	Project Level
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Elizabeth Boggs	Researcher and Consumer Representative	System Level
Shawn Boles	Specialized Training Program, University of Oregon	Consultant
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APPENDIX C:

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APPENDIX D:

CURRENT OSERS DEFINITION OF SUPPORTED EMPLOYMENT

(Developed for National Demonstration Projects)

DESIGNING SUPPORTED EMPLOYMENT DEMONSTRATION PROJECTS

Because Supported Employment Demonstration Projects constitute a new priority in the Rehabilitation Services Administration's Program of Special Projects and Demonstrations for Providing Vocational Rehabilitation Services to Severely Handicapped Individuals, this additional information is provided to assist applicants in design of proposed projects. The information is descriptive, not regulatory. Information in the regulations takes precedence if there is any apparent conflict.

The design of a supported employment demonstration project requires four steps:

1. An analysis and description of the current system of ongoing day and vocational services for persons with severe disabilities. This analysis should include descriptions of the State's administration of the program or programs, provide information on the characteristics of local services, and show exactly how many service recipients are currently engaged in supported employment. Additional information on program philosophy, waiting lists, current program outcomes and so on, should be included, as should a description of how services targeted for the supported employment program differ from other day and vocational services for persons with disabilities in the State.

2. A description of the desired statewide system of supported supported employment. This requires a detailed analysis of the system of services the State expects to have in place at the end of the proposed project. Information on anticipated State administration and evaluation procedures, characteristics of local services, relationships with the business community, and consumer outcomes should be included.

3. An analysis of the discrepancy between the current and desired system of services. This analysis should include a precise description of the critical features of service content, delivery, management, and administration that must be addressed to eliminate discrepancy.

4. Development of project objectives to remove the identified discrepancy. These objectives and activities should constitute a comprehensive, longitudinal and coordinated effort to move systematically from the current to desired system of supported employment services.

It is anticipated that different states will identify different issues to be resolved in order to implement statewide supported employment programs. Nevertheless, most states will be able to achieve lasting statewide change only by developing strategies for: adjusting state plans, regulations, and funding and evaluation procedures for day services to reflect the characteristics and outcomes of supported employment; developing procedures for inter-agency coordination in establishing and funding supported employment; expanding the work opportunities available to persons engaged in supported employment; developing the capacity of existing and new community organizations to provide supported employment; building a cadre of staff who are skilled in providing supported employment; and informing consumers, parents, advocates, employers and others about the nature and purpose of supported employment. Naturally the strategies that will be effective in resolving these and other issues will be determined by the characteristics of the State, the existing services, and employment opportunities.

Both assessing the current service delivery system and projecting the desired one require a thorough understanding of supported employment and a reliable process for determining when an individual is or is not engaged in supported employment. The definition in the regulations for this program establishes four criteria for supported employment. To be in supported employment, an individual must be (1) engaged in employment, (2) in regular (integrated) work settings, (3) with ongoing support, and (4) he or she must experience a disability so severe that ongoing support is essential to maintaining employment.

To help applicants apply these criteria to evaluate their current services and define the statewide system that should result from the project, we recommend use of the following measures and standards to determine whether an individual or program fits the definition of supported employment:

1. *Employment*. Supported employment is paid employment which cannot exist without a regular opportunity to work. An individual should be considered to meet the employment criterion if he or she engages in paid work for at least an average of our hours each day, five days per week or another schedule offering at least 20 hours of work per week. This standard does not establish a minimum wage or productivity level for supported employment.

2. *Integration*. Work is integrated when it provides frequent daily social interactions with people without disabilities who are not paid caregivers. Since few state or local agencies currently are able to describe the extent of integration of individuals in day services, we recommend that the following criteria be used to estimate the capacity for integration in supported employment: an individual's work can be considered integrated when he or she works in a place (a) where no more than eight people with disabilities work together and which is not immediately adjacent to another program serving persons with disabilities and (b) where persons without disabilities who are not paid caregivers are present in the work setting or immediate vicinity.

For example, an individual who works in a local bank creating microfilm records of transactions clearly meets the integration criteria for supported employment. So do: six individuals with disabilities who work together in an enclave within an electronic factory; a mobile janitorial crew that employs five persons with disabilities in community work sites; and a small bakery that employs persons with and without disabilities.

While integration is much more likely when persons with disabilities work singly or in small groups among persons who are not disabled, the social interactions necessary for integration are also possible in other program sizes.

3. Ongoing support. Supported employment exists only when ongoing support is provided. An individual should be considered to be receiving ongoing support: (a) when public funds are available on an ongoing basis to an individual or service provider who is responsible for providing employment support, and (b) when these funds are used for interventions directly related to sustaining employment.

4. Severe disability. Supported employment exists when the persons served require ongoing support and is inappropriate for persons who would be better served in time-limited preparation programs leading to independent employment. The priority for the Supported Employment Demonstration Projects is those individuals: (1) who previously have not been served or served successfully by vocational rehabilitation because of the lack of ongoing services needed to sustain employment after time-limited rehabilitation services are completed. With the development of supported employment programs in a state, however, it is expected that the vocational

rehabilitation agency will provide services to these individuals that lead to successful closure into supported employment; and (2) who are or may be funded for ongoing services in day programs. If those individuals who fit these two criteria are included on a priority basis, a state may also use the Supported Employment Demonstration Projects to establish supported employment for other groups of individuals whom it chooses to fund for ongoing day services.